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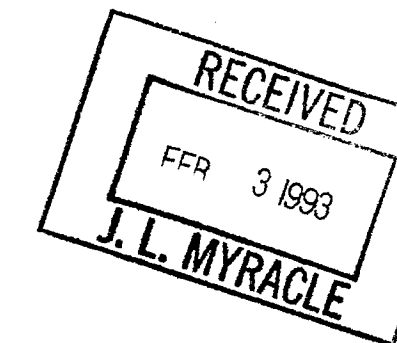
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**PHILIP MORRIS U.S.A.  
RESEARCH CENTER  
RICHMOND, VIRGINIA**

**C.I. REPORT  
JANUARY 31, 1993**



Distribution

G. Bible  
M. Bring  
W. I. Campbell  
H. Maxwell  
M. Miles  
R. W. Murray  
M. Bourlas  
H. Burnley  
R. Carchman  
L. Cooper  
D. E. R. Dangoor  
S. C. Darrah  
C. L. Ellis  
C. Fuller  
A. Gembler  
R. Heretick  
K. Houghton  
A. Kassman  
W. F. Kuhn  
R. Lively  
D. Milby  
J. L. Myracle  
S. C. Parrish  
L. Pollak  
H. Steele  
W. Thoma  
W. Webb  
L. S. Wexler  
J. F. Whidby

PREPARED BY: S. W. Laffoon  
S. W. Laffoon

APPROVED BY: R. A. Fenner  
R. A. Fenner

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## ALPHABETICAL INDEX OF BRANDS

Brand	Size	Page No.*	Company**	Brand	Size	Page No.†	Company**
Alpine	K-FM	63	PM	Doral Full Flavor	100	71	R
Alpine Lights	K-FM	61	PM	Doral Full Flavor	100M	76	R
Alpine Lights	100M	74	PM	Doral Lights	K-F	53	R
Alpine	100M	76	PM	Doral Lights	K-FM	61	R
American Full Flavor	K-F	82	A	Doral Lights	100	69	R
American Lights	100	84	A	Doral Lights	100M	74	R
American Lights	K-F	82	A	Doral Ultra Lights	K-F	52	R
Bacley (Box)	K-F	84	A	Doral Ultra Lights	100	66	R
Bacley	100	10	BW	Engle Ovals (Box)	K-NF	82	PM
Bacley	K-F	82	BW	Eve Lights (Box)	120	84	LG
Belair	K-FM	22	BW	Eve Lights (Box)	120M	86	LG
Belair	100M	86	BW	Eve Ultra Lights (Box)	100	84	LG
Benson & Hedges (Box) - Princess Pack	K-F	82	PM	Eve Ultra (Box)	120	84	LG
Benson & Hedges	100	33	PM	H.Tanyon	120M	86	LG
Benson & Hedges	100M	40	PM	Kent (Box)	K-NF	82	A
Benson & Hedges (Box)	100	33	PM	Kent	L-F	82	LO
Benson & Hedges (Box)	100M	30	PM	Kent	K-F	17	LO
Benson & Hedges Lights	100M	40	PM	Kent III Ultra Lx.	100	82	LO
Benson & Hedges Lights	100	39	PM	Kent III Ultra Lx.	100M	86	LO
Benson & Hedges Lights (Box)	100M	84	PM	Kent III Ultra Lx. (Box)	100	84	LO
Benson & Hedges Lx. (Box)	100M	86	PM	Kent III Ultra Lx. (Box)	L-F	82	LO
B & H DeLuxe UL (Box)	100	27	PM	Kent Golden Lx.	K-F	82	LO
B & H DeLuxe UL (Box)	100M	36	PM	Kent Golden Lx.	K-FM	86	LO
B & H Multiplier	K-FM	34	PM	Kent Golden Lx.	100	84	LO
Bristol Full Flavor	K-F	59	PM	Kent Golden Lx.	100M	86	LO
Bristol Full Flavor	100	71	PM	Kent Golden Lx.	100M	86	LO
Bristol Full Flavor	K-NF	60	PM	Kent Golden Lx. (Box)	100	84	LO
Bristol	K-F	55	PM	Kool	R-NFM	86	BW
Bristol Lights	K-F	55	PM	Kool (Box)	K-FM	24	BW
Bristol Lights	K-FM	62	PM	Kool	K-FM	25	BW
Bristol Lights	100	68	PM	Kool Lights	K-FM	25	BW
Bristol Lights	100M	74	PM	Kool Lights	K-FM	23	BW
Bristol Ultra Lights	100	66	PM	Kool Lights	K-FM	86	BW
Bucles	K-F	58	PM	Kool Milla (Box)	K-FM	86	BW
Bucles Lights	K-F	53	PM	Kool Ultra	K-FM	86	BW
Bull Durham (Box)	K-F	58	A	Kool Ultra	100M	40	BW
Bull Durham Lights (Box)	K-F	55	A	Kool Lights	100M	86	BW
Cambridge Full Flavor	K-F	60	PM	Kool Milla	100M	86	BW
Cambridge Full Flavor	K-F	72	PM	Kool Ultra	K-FM	86	BW
Cambridge Ultra Low Tar	100	66	PM	Lark Lights	K-FM	48	LG
Cambridge Lights	K-F	56	PM	Lark Lights	K-F	49	LG
Cambridge Lights	K-FM	62	PM	Lark Lights	100C	16	LG
Cambridge Lights	100	69	PM	L & M	K-F	31	LG
Cambridge Lights	100M	75	PM	L & M (Box)	K-F	82	LG
Cambridge Lowest	K-F	52	PM	L & M Long Lights	100	84	LG
Cambridge Lowest	100	65	PM	Lucky Strike	R-NF	51	A
Camel (Box)	K-F	19	R	Lucky Strike Low Tar	K-F	82	A
Camel	R-NF	51	R	Lucky Strike Low Tar (Box)	K-F	82	A
Camel Lights (Box)	K-F	17	R	Lucky Strike	100	84	A
Camel Lights	K-F	14	R	Lucky Strike Lights	K-F	82	A
Camel Lights	K-F	15	R	Lucky Strike Low Tar	100	84	A
Camel Ultra Lights	L-F	30	R	Lucky Strike Lights	K-F	57	R
Camel Ultra Lights (Box)	100	12	R	Magna	K-F	57	R
Capri (Box)	K-F	45	BW	Magna Lites (Box)	K-F	54	R
Capri (Box)	100M	86	BW	Magna Lites	K-F	54	R
Ultra Carlton (Box)	K-F	10	A	Mallibu	K-F	84	A
Carlton	K-FM	20	A	Mallibu Lights	100	84	A
Carlton	100	26	A	Mallibu Ultra Lights	100	84	A
Carlton (Box)	100M	26	A	Marlboro (Box)	L-F	50	PM
Carlton (Box)	100M	86	A	Marlboro 25's	K-F	82	PM
Carlton (Box)	120	34	A	Marlboro Lights	K-F	82	PM
Carlton	120M	42	A	Marlboro Lights 25's	K-F	15	PM
Century 25's	K-F	82	R	Marlboro Lights (Box)	K-F	31	PM
Century 25's	100	84	R	Marlboro Lights (Box)	100	22	PM
Century Lights 25's	100	84	R	Marlboro Lights (Box)	100M	86	PM
Century Lights 25's	100	84	R	Marlboro Lights (Box)	K-FM	23	PM
Chesfield	R-NF	82	LG	Marlboro	K-FM	33	PM
Chesfield King	K-NF	51	LG	Marlboro (Box)	100	84	PM
Commander King Size	K-NF	51	PM	Marlboro Medium	K-F	16	PM
Commander Regular	R-NF	82	PM	Marlboro Medium (Box)	K-F	16	PM
Doral Full Flavor	K-F	59	R	Max	120	84	LO
Doral Full Flavor	K-FM	64	R	Max	120M	86	LO
Doral Full Flavor	K-FM	64	R	Ment Ultra Lights	K-F	82	PM
Doral Full Flavor	K-FM	64	R	Ment Ultra Lights (Box)	K-F	11	PM

\*Location of complete analytical data in report.

\*\*Key: A = American; BW = Brown &amp; Williamson; LG = Liggett Group; LO = Lorillard; PM = Philip Morris; R = Reynolds

## ALPHABETICAL INDEX OF BRANDS

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Brand	Size	Page No.*	Company**	Brand	Size	Page No.*	Company**
Ment Ultra Ls. (Box)	100	28	PM	Raleigh Lights	100	84	BW
Ment (Box)	K-F	82	PM	Raleigh	100	84	BW
Ment	K-F	13	PM	Raleigh Extra Ultra Lights	K-F	52	BW
Ment	K-FM	21	PM	Raleigh Extra Ultra Lights	100	67	BW
Ment	K-FM	86	PM	Richland 25's	K-F	82	BW
Ment	100	29	PM	Richland 25's	100	84	BW
Ment Ultra Ls.	100	84	PM	Richland Lights 25's	K-F	82	BW
Ment	100M	38	PM	Richland Lights 25's	100	84	BW
Ment Ultra Ls.	100M	86	PM	Salem	K-FM	24	R
Ment Ultra Ls.	100M	73	A	Salem	100M	41	R
Misty Lights Slims (Box)	100	67	A	Salem Lights	K-FM	22	R
Misty Lights Slims (Box)	100	70	A	Salem Lights	100M	38	R
Misty Slims Full Flavor (Box)	100M	75	A	Salem Lights (Box)	100M	39	R
Misty Slims Full Flavor (Box)	K-F	59	A	Salem Ultra Lights	K-FM	20	R
Monclair	100	67	A	Salem Ultra Lights	100M	36	R
Monclair Ultra Lights	100	72	A	Salem Slim Lights (Box)	100M	47	R
Monclair	K-F	56	A	Saratoga (Box)	120	35	PM
Monclair Lights	K-FM	63	A	Saratoga (Box)	120M	42	PM
Monclair Lights	100	70	A	Satin	100	84	LO
Monclair Lights	100M	75	A	Satin	100M	86	LO
More	120	35	R	Silva Thins (Box)	100	84	A
More	120M	43	R	Silva Thins (Box)	100M	86	A
More Lights (Box)	100	45	R	Spring	100M	86	LO
More Lights (Box)	100M	47	R	Sterling Lights	K-F	53	R
More White Lights	120	34	R	Sterling Ultra Lights	100M	73	R
More White Lights	120M	42	R	Sterling Lights	100M	73	R
Newport (Box)	L-FM	50	LO	Sterling	100	71	R
Newport (Box)	100M	36	LO	Sterling	100M	76	R
Newport	K-FM	25	LO	Sterling Lights	100	68	R
Newport (25's)	K-FM	86	LO	Sterling Ultra Lights	100	65	R
Newport	100M	41	LO	Sterling	K-F	57	R
Newport (25's)	100M	86	LO	Sterling	K-FM	63	R
Newport Lights	K-FM	21	LO	Sterling Lights	K-FM	62	R
Newport Lights (Box)	L-FM	86	LO	Style Lights (Box)	100	69	LO
Newport Lights	100M	37	LO	Style Lights	100	69	LO
Newport Lights (Box)	100M	86	LO	Style Lights (Box)	100M	74	LO
Newport Stripes (Box)	100	84	LO	Tall	120	84	A
Newport Stripes (Box)	100M	86	LO	Tall	120M	86	A
Now (Box)	K-F	82	R	Tareyton	K-PC	48	A
Now	K-F	10	R	Tareyton	100C	84	A
Now	K-FM	20	R	Tareyton Lights	K-PC	84	A
Now	100	36	R	Tareyton Long Lights	100C	84	A
Old Gold Straight	100M	26	R	Triumph	K-F	82	LO
Old Gold	K-NF	82	LO	Triumph	K-FM	86	LO
Old Gold Lights	K-F	82	LO	Triumph	100	84	LO
Old Gold	100	84	LO	Triumph	100M	86	LO
Old Gold	K-F	82	LO	True	K-F	11	LO
Pall Mall	K-F	82	A	True	100	84	LO
Pall Mall Lights	100	84	A	True	K-FM	86	LO
Pall Mall	K-NF	51	A	True	100M	86	L
Pall Mall (Gold)	100	32	A	Vanage	K-F	13	R
Pall Mall (Red)	100	84	A	Vanage	K-FM	21	R
Parliament Lights (Box)	L-F	50	PM	Vanage	100	27	R
Parliament Lights	K-F	13	PM	Vanage	100M	39	R
Parliament Lights	100C	49	PM	Vanage Ultra Ls.	K-F	11	R
Players Navy Cut (Box)	R-NF	82	PM	Vanage Ultra Ls.	100	27	R
Players (Box)	K-F	82	PM	Viceroy	K-F	60	BW
Players (Box)	K-FM	86	PM	Viceroy (Box)	K-F	82	BW
Players (Box)	100	84	PM	Viceroy Lights	K-F	82	BW
Players Lights 25's	K-F	82	PM	Viceroy Lights (Box)	K-F	56	BW
Players Lights 25's	K-FM	86	PM	Viceroy Lights	100	70	BW
Players Lights 25's	100	84	PM	Viceroy	100	72	BW
Players Lights 25's	100M	86	PM	Va. Slims	100	45	PM
Pyramid	K-NF	82	LG	Va. Slims	100M	47	PM
Pyramid Lights	K-F	54	LG	Va. Slims Lights (Box)	100	44	PM
Pyramid Ultra Lights	100	65	LG	Va. Slims UL (Box)	100	44	PM
Pyramid Lights	100	68	LG	Va. Slims UL (Box)	100M	46	PM
Pyramid Lights	100M	75	LG	Va. Slims Lights (Box)	120	34	PM
Pyramid Full Flavor	K-F	58	LG	Va. Slims Lights (Box)	100M	46	PM
Pyramid Full Flavor	K-FM	64	LG	Va. Slims Ls. (Box)	100	43	PM
Pyramid Full Flavor	100	72	LG	Va. Slims Superslims (Box)	100M	44	PM
Pyramid Full Flavor	100M	76	LG	Va. Slims Superslims (Box)	100M	46	PM
Raleigh	K-NF	82	BW	Winston (Box)	K-F	18	R
Raleigh	K-F	82	BW	Winston	K-F	18	R
Raleigh Extra Lights	K-F	55	BW	Winston Lights (Box)	K-F	14	R
Raleigh Extra	K-F	60	BW	Winston Lights	K-F	14	R
Raleigh Extra	K-NF	82	BW	Winston Ultra Lights	K-F	12	R
Raleigh Extra Lights	K-FM	61	BW	Winston Lights	100	30	R
Raleigh Extra	100	71	BW	Winston Lights (Box)	100	29	R
Raleigh Extra Lights	100	70	BW	Winston	100	33	R
Raleigh Extra Lights	100M	73	BW	Winston Ultra Lights	100	27	R
Raleigh Lights	K-F	82	BW	Winston Select	K-F	19	R
				Winston Select (Box)		19	



## C.I. HIGHLIGHTS JANUARY, 1993

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### NEW BRANDS

#### AMERICAN

##### MISTY ULTRA LIGHTS SLIMS 100 (BOX) PLAIN & MENTHOL

American began national shipments of *Misty Ultra Lights Slims 100 (Box) Plain & Menthol* in November. This discount product delivers 5 mg tar, 0.5 mg nicotine, and 0.6 mg menthol in smoke.

#### LORILLARD

##### HARLEY-DAVIDSON LONG SIZE (BOX)

##### HARLEY-DAVIDSON KS (SOFT PACK)

##### HARLEY-DAVIDSON LIGHTS KS (SOFT PACK)

Lorillard is test marketing *Harley-Davidson LS (Box)*, *Harley-Davidson KS (Soft Pack)*, and *Harley-Davidson Lights KS (Soft Pack)* in Houston, Texas and Minneapolis, Minnesota at a premium price. Lorillard will support these test markets with \$1.00 off per pack from November through January. These products will also be test marketed in Pittsburgh, Pennsylvania at a branded discount price and will not be supported promotionally through introduction. Testing on *Harley-Davidson KS (Soft Pack)* is awaiting sufficient sample from test market.

### BRAND MODIFICATIONS

#### R. J. REYNOLDS

##### NOW KS (PLAIN & MENTHOL)

##### NOW 100 (PLAIN & MENTHOL)

R. J. Reynolds is no longer using Freon expanded tobacco for their *Now* brands. Freon has dropped from 10 ppm to less than 0.3 ppm. Camel, Winston, Vantage, Salem, Doral, and Sterling brand families continue to contain Freon levels ranging from 3 to 11 ppm.

Lower total alkaloids and total reducing sugars were observed for all *Now* packings. Higher tobacco weight and rod density were observed for *Now KS (Plain & Menthol)* and *Now 100 Menthol*. No changes in smoke deliveries were noted.

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**BRAND MODIFICATIONS (cont.)****R. J. REYNOLDS****WINSTON LIGHTS KING SIZE (BOX)**

Higher total RTD (127 to 136 mm of H<sub>2</sub>O) was observed for *Winston Lights King Size (Box)* correlating with higher tobacco weight (0.68 to 0.71 g) and rod density (0.252 to 0.262 g/cc). Lower filter ventilation (25 to 15%) was also noted. The smoke deliveries did not change.

**AMERICAN****CARLTON 100 (BOX)**

A longer filter (30.1 to 31.0 mm) resulted in a shorter rod length (68.8 to 68.1 mm) for *Carlton 100 (Box)*. No changes were noted in smoke deliveries.

**AMERICAN****CARLTON 120 (SOFT PACK)**

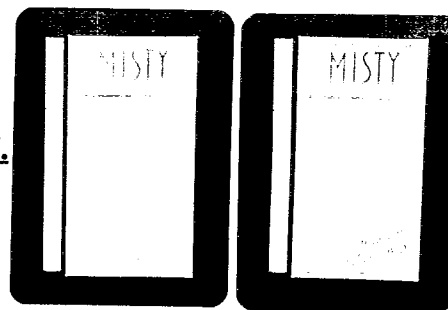
Lower puff count (12.5 to 11.5) and total RTD (98 to 88 mm of H<sub>2</sub>O) were observed for *Carlton 120* cigarettes, correlating with lower tobacco weight (0.80 to 0.74 g) and rod density (0.224 to 0.208 g/cc). No changes were noted in smoke deliveries.

**AMERICAN****MONTCLAIR ULTRA LIGHTS 100 (SOFT PACK)**

The higher total RTD (126 to 146 mm of H<sub>2</sub>O) observed for *Montclair Ultra Lights 100* correlated with lower filter ventilation (49 to 35%). The smoke deliveries did not change.

**NEW BRANDS****AMERICAN****MISTY ULTRA LIGHTS SLIMS 100 (BOX) PLAIN & MEN.**

American began national shipments of *Misty Ultra Lights Slims 100 (Plain & Menthol)* in November.



	Misty Ultra Lights Slims 100 (Box)	Virginia Slims Ultra 100 (Box)	Misty Ultra Lights Slims 100 (Box)	Va.Slims Ultra Lts. 100 (Box)
<b><u>Smoke</u></b>				
Butt Length, mm	39	39	39	39
FTC Tar, mg/cigt.	5.4	5.8	5.5	6.1
Nicotine, mg/cigt.	0.50	0.50	0.49	0.52
Puffs/cigt.	8.8	9.9	8.7	10.1
Filtration Eff., %	51	57	51	57
Filler Rod TPM, mg/cigt.	24.0	26.8	25.2	27.3
CO, mg/cigt.	4.6	5.3	4.6	5.7
<b><u>Cigarette</u></b>				
Total RTD, mm of H <sub>2</sub> O	99	109	101	110
Static Burn Time, min.	6.4	7.3	6.3	7.4
Length, mm	98.8	98.5	98.6	98.5
Circumference, mm	23.0	23.1	23.0	23.1
<b><u>Paper</u></b>				
Component Type	Citrate	Citrate	Citrate	Citrate
Component Percent	0.7	0.4	0.8	0.5
Permeability, ml/cm <sup>2</sup> x min.	27	44	31	30
<b><u>Filter</u></b>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	113	133	116	138
Length, mm	32.1	31.3	31.7	31.4
Weight, g	0.19	0.17	0.19	0.18
Tipping paper length, mm/Color	36/White	36/White	36/White	36/White
Ventilation, %	58	57	56	59
Type/Rows of Holes	Laser/2	Laser/2	Laser/2	Laser/2
<b><u>Filler</u></b>				
Total Alkaloids, % (DWB)	2.02	1.92	1.94	1.92
Total red. Sugars, % (DWB)	6.9	6.7	6.2	6.9
Wt. of Tob., g (12.5% OV)	0.617	0.649	0.586	0.648
Rod Density, g/cc	0.219	0.228	0.208	0.226
Reconstituted Tob., %	26	22	26	22
E.S., %	None	3	None	3
Expanded Tobacco, %	26	19	26	19
<b><u>Menthol, mg/cigt.</u></b>				
Smoke	-	-	0.57	0.41
Filler	-	-	3.7	3.3
Filter	-	-	2.6	2.1

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NEW BRANDSLORILLARDHARLEY-DAVIDSON LS (BOX)

Lorillard is test marketing *Harley-Davidson LS (Box)* in Houston, Texas and Minneapolis, MN at a premium price, and in Pittsburgh, PA at a discount price.



	<u>Harley-Davidson Long Size (Box)</u>	<u>Marlboro Long Size (Box)</u>
<b><u>Smoke</u></b>		
Butt Length, mm	28	26
FTC Tar, mg/cigt.	13.7	15.8
Nicotine, mg/cigt.	0.91	1.10
Puffs/cigt.	8.1	8.8
Filtration Eff., %	46	42
Filler Rod TPM, mg/cigt.	30.0	32.0
CO, mg/cigt.	14.0	13.3
<b><u>Cigarette</u></b>		
Total RTD, mm of H <sub>2</sub> O	158	107
Static Burn Time, min.	8.1	8.2
Length, mm	80.5	79.3
Circumference, mm	25.0	24.9
<b><u>Paper</u></b>		
Component Type	Citrate	Citrate
Component Percent	0.7	0.5
Permeability, ml/cm <sup>2</sup> x min.	33	40
<b><u>Filter</u></b>		
Type	CA	CA
RTD, mm of H <sub>2</sub> O	76	67
Length, mm	20.9	19.0
Weight, g	0.13	0.12
Tipping paper length, mm/Color	25/Cork	23/Cork
Ventilation, %	None	13
Type/Rows of Holes	-	Laser/1
<b><u>Filler</u></b>		
Total Alkaloids, % (DWB)	1.89	1.98
Total red. Sugars, % (DWB)	6.5	6.8
Wt. of Tob., g (12.5% OV)	0.733	0.697
Rod Density, g/cc	0.248	0.234
Reconstituted Tob., %	27	22
E.S., %	None	3
Expanded Tobacco, %	11	12

## NEW BRANDS

### LORILLARD

#### HARLEY-DAVIDSON LIGHTS KS (SP)

Lorillard is test marketing *Harley-Davidson Lights KS (SP)* in Houston, Texas and Minneapolis, MN at a premium price, and in Pittsburgh, PA at a discount price.



	Harley-Davidson <u>Lights KS (SP)</u>	Merit <u>King Size (SP)</u>
<b><u>Smoke</u></b>		
Butt Length, mm	35	35
FTC Tar, mg/cigt.	7.9	8.1
Nicotine, mg/cigt.	0.68	0.64
Puffs/cigt.	7.1	7.9
Filtration Eff., %	52	61
Filler Rod TPM, mg/cigt.	30.1	30.5
CO, mg/cigt.	8.2	8.4
<b><u>Cigarette</u></b>		
Total RTD, mm of H <sub>2</sub> O	118	120
Static Burn Time, min.	8.1	7.6
Length, mm	84.0	84.2
Circumference, mm	24.9	25.0
<b><u>Paper</u></b>		
Component Type	Citrate	Citrate
Component Percent	2.1	1.5
Permeability, ml/cm <sup>2</sup> x min.	35	46
<b><u>Filter</u></b>		
Type	CA	CA
RTD, mm of H <sub>2</sub> O	99	112
Length, mm	25.1	26.9
Weight, g	0.16	0.17
Tipping paper length, mm/Color	32/Cork	32/Cork
Ventilation, %	35	32
Type/Rows of Holes	Laser/4	Laser/2
<b><u>Filler</u></b>		
Total Alkaloids, % (DWB)	2.20	1.92
Total red. Sugars, % (DWB)	8.1	5.9
Wt. of Tob., g (12.5% OV)	0.660	0.671
Rod Density, g/cc	0.228	0.236
Reconstituted Tob., %	19	22
E.S., %	None	3
Expanded Tobacco, %	12	12

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## BRAND MODIFICATIONS

### R. J. REYNOLDS

#### NOW KS (PLAIN AND MENTHOL)

R. J. Reynolds is no longer using Freon expanded tobacco for their *Now* brands.

	<u>Now King Size</u>		<u>Now King Size Menthol</u>	
	<u>Previous</u>	<u>Present</u>	<u>Previous</u>	<u>Present</u>
<b><u>Smoke</u></b>				
Butt Length, mm	34	34	34	34
FTC Tar, mg/cigt.	1.3	1.2	1.1	0.9
Nicotine, mg/cigt.	0.16	0.15	0.13	0.13
Puffs/cigt.	6.9	6.9	6.9	7.0
CO, mg/cigt.	1.9	1.8	1.6	1.5
<b><u>Cigarette</u></b>				
Total RTD, mm of H <sub>2</sub> O	109	106	107	105
Length, mm	84.2	83.9	84.0	83.9
Circumference, mm	24.9	24.9	24.8	24.9
<b><u>Paper</u></b>				
Component Type	Citrate	Citrate	Citrate	Citrate
Component Percent	0.5	0.5	0.5	0.5
Permeability, ml/cm <sup>2</sup> x min.	39	40	41	38
<b><u>Filter</u></b>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	159	151	156	152
Length, mm	26.9	26.8	26.8	26.9
Weight, g	0.19	0.19	0.20	0.20
Tipping paper length, mm/Color	31/White	31/White	31/White	31/White
Ventilation, %	75	74	76	77
Type/Rows of Holes	Hauni	Hauni	Hauni	Hauni
	Laser/1	Laser/1	Laser/1	Laser/1
<b><u>Filler</u></b>				
Total Alkaloids, % (DWB)	2.22	1.97	2.21	2.06
Total red. Sugars, % (DWB)	4.8	3.4	4.8	3.6
Wt. of Tob., g (12.5% OV)	0.471	0.494	0.467	0.507
Rod Density, g/cc	0.167	0.176	0.167	0.181
Reconstituted Tob., %	15	15	15	15
E.S., %	None	None	None	None
Expanded Tobacco, %	51	51	51	51
Freon, ppm	10	<0.3	10	<0.3
<b><u>Menthol, mg/cigt.</u></b>				
Smoke	-	-	0.16	0.16
Filler	-	-	3.2	3.4
Filter	-	-	4.8	5.0

# BRAND MODIFICATIONS

## R. J. REYNOLDS

### NOW 100 (PLAIN AND MENTHOL)

R. J. Reynolds is no longer using Freon expanded tobacco for their *Now* brands.

	<u>Now 100</u>		<u>Now 100 Menthol</u>	
	<u>Previous</u>	<u>Present</u>	<u>Previous</u>	<u>Present</u>
<b><u>Smoke</u></b>				
Butt Length, mm	38	38	38	38
FTC Tar, mg/cigt.	2.2	2.3	2.1	2.1
Nicotine, mg/cigt.	0.23	0.24	0.23	0.22
Puffs/cigt.	8.3	8.2	8.3	8.3
CO, mg/cigt.	3.0	3.0	3.0	2.6
<b><u>Cigarette</u></b>				
Total RTD, mm of H <sub>2</sub> O	92	97	91	92
Length, mm	98.7	99.0	99.1	99.2
Circumference, mm	24.8	24.8	24.9	24.8
<b><u>Paper</u></b>				
Component Type	Citrate	Citrate	Citrate	Citrate
Component Percent	1.4	1.5	1.5	1.5
Permeability, ml/cm <sup>2</sup> x min.	27	27	26	24
<b><u>Filter</u></b>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	133	132	129	129
Length, mm	30.5	30.7	30.9	30.9
Weight, g	0.20	0.19	0.20	0.20
Tipping paper length, mm/Color	35/White	35/White	35/White	35/White
Ventilation, %	73	70	72	70
Type/Rows of Holes	Hauni	Hauni	Hauni	Hauni
	Laser/1	Laser/1	Laser/1	Laser/1
<b><u>Filler</u></b>				
Total Alkaloids, % (DWB)	2.24	1.92	2.24	1.97
Total red. Sugars, % (DWB)	4.9	3.8	5.4	3.5
Wt. of Tob., g (12.5% OV)	0.581	0.596	0.574	0.612
Rod Density, g/cc	0.174	0.178	0.171	0.183
Reconstituted Tob., %	15	15	15	15
E.S., %	None	None	None	None
Expanded Tobacco, %	51	51	51	51
Freon, ppm	10	<0.3	10	<0.3
<b><u>Menthol, mg/cigt.</u></b>				
Smoke	-	-	0.28	0.25
Filler	-	-	3.8	4.1
Filter	-	-	3.2	3.5

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## BRAND MODIFICATIONS

### R. J. REYNOLDS

#### WINSTON LIGHTS KING SIZE (BOX)

Higher total RTD was observed for *Winston Lights King Size (Box)*, correlating with higher tobacco weight and rod density. Lower filter ventilation was also noted. There were no changes in smoke deliveries.

#### Winston Lights King Size (Box)

	<u>Previous</u>	<u>Present</u>
<b><u>Smoke</u></b>		
Butt Length, mm	34	34
FTC Tar, mg/cigt.	9.7	9.8
Nicotine, mg/cigt.	0.73	0.73
Puffs/cigt.	8.8	8.6
Filler Rod TPM, mg/cigt.	58	58
CO, mg/cigt.	11.1	10.9
<b><u>Cigarette</u></b>		
Total RTD, mm of H <sub>2</sub> O	127	136
Length, mm	83.1	82.9
Circumference, mm	24.6	24.6
<b><u>Paper</u></b>		
Component Type	Citrate	Citrate
Component Percent	0.5	0.5
Permeability, ml/cm <sup>2</sup> x min.	26	25
<b><u>Filter</u></b>		
Type	CA	CA
RTD, mm of H <sub>2</sub> O	109	108
Length, mm	26.9	26.9
Weight, g	0.17	0.17
Tipping paper length, mm	31	31
Ventilation, %	25	15
Type/Rows of Holes	Laser/2	Laser/2
<b><u>Filler</u></b>		
Total Alkaloids, % (DWB)	1.70	1.75
Total red. Sugars, % (DWB)	8.0	7.4
Wt. of Tob., g (12.5% OV)	0.683	0.707
Rod Density, g/cc	0.252	0.262
Reconstituted Tob., %	25	25
E.S., %	None	None
Expanded Tobacco, %	7	7



# BRAND MODIFICATIONS

## AMERICAN

### CARLTON 100 (BOX)

A longer filter resulted in a shorter rod length for *Carlton 100 (Box)*. No changes were noted in smoke deliveries.

	<u>Carlton 100 (Box)</u>	
	<u>Previous</u>	<u>Present</u>
<b><u>Smoke</u></b>		
Butt Length, mm	38	38
FTC Tar, mg/cigt.	1.2	1.3
Nicotine, mg/cigt.	0.14	0.15
Puffs/cigt.	8.9	9.0
Filler Rod TPM, mg/cigt.	68	68
CO, mg/cigt.	1.4	1.4
<b><u>Cigarette</u></b>		
Total RTD, mm of H <sub>2</sub> O	78	78
Static Burn. Time, min.	5.9	5.9
Length, mm	98.9	99.0
Circumference, mm	24.5	24.5
<b><u>Paper</u></b>		
Component Type	Citrate	Citrate
Component Percent	1.8	1.8
Permeability, ml/cm <sup>2</sup> x min.	25	22
<b><u>Filter</u></b>		
Type	CA	CA
RTD, mm of H <sub>2</sub> O	126	128
Length, mm	30.1	31.0
Weight, g	0.19	0.19
Tipping paper length, mm	35	35
Ventilation, %	81	82
<b><u>Filler</u></b>		
Total Alkaloids, % (DWB)	2.26	2.24
Total red. Sugars, % (DWB)	4.3	5.0
Wt. of Tob., g (12.5% OV)	0.591	0.594
Rod Length, mm	68.8	68.1
Rod Density, g/cc	0.180	0.183
Reconstituted Tob., %	20	20
E.S., %	None	None
Expanded Tobacco, %	46	46

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## BRAND MODIFICATIONS

### AMERICAN

#### CARLTON 120 (SOFT PACK)

Lower puff count and total RTD were observed for *Carlton 120* cigarettes, correlating with lower tobacco weight and rod density. The smoke deliveries did not change.

	<u>Carlton 120 (Soft Pack)</u>	
	<u>Previous</u>	<u>Present</u>
<b><u>Smoke</u></b>		
Butt Length, mm	38	38
FTC Tar, mg/cigt.	5.5	5.5
Nicotine, mg/cigt.	0.53	0.54
Puffs/cigt.	12.5	11.5
Filler Rod TPM, mg/cigt.	45	45
CO, mg/cigt.	4.2	4.2
<b><u>Cigarette</u></b>		
Total RTD, mm of H <sub>2</sub> O	98	88
Static Burn. Time, min.	6.3	6.2
Length, mm	119.6	119.6
Circumference, mm	22.3	22.3
<b><u>Paper</u></b>		
Component Type	Citrate	Citrate
Component Percent	0.8	0.8
Permeability, ml/cm <sup>2</sup> x min.	48	46
<b><u>Filter</u></b>		
Type	CA	CA
RTD, mm of H <sub>2</sub> O	96	95
Length, mm	29.6	29.7
Weight, g	0.16	0.16
Tipping paper length, mm	35	35
Ventilation, %	67	67
<b><u>Filler</u></b>		
Total Alkaloids, % (DWB)	2.22	2.21
Total red. Sugars, % (DWB)	6.0	6.1
Wt. of Tob., g (12.5% OV)	0.799	0.741
Rod Density, g/cc	0.224	0.208
Reconstituted Tob., %	20	20
E.S., %	None	None
Expanded Tobacco, %	34	34

# BRAND MODIFICATIONS

## AMERICAN

### MONTCLAIR ULTRA LIGHTS 100 (SOFT PACK)

The higher total RTD observed for *Montclair Ultra Lights* correlated with lower filter ventilation. There were no changes in smoke deliveries.

#### Montclair Ultra Lights 100 (Soft Pack)

	<u>Previous</u>	<u>Present</u>
<b><u>Smoke</u></b>		
Butt Length, mm	38	38
FTC Tar, mg/cigt.	6.2	6.2
Nicotine, mg/cigt.	0.56	0.56
Puffs/cigt.	9.6	9.4
Filler Rod TPM, mg/cigt.	61	62
CO, mg/cigt.	8.4	8.6
<b><u>Cigarette</u></b>		
Total RTD, mm of H <sub>2</sub> O	126	146
Length, mm	99.8	99.5
Circumference, mm	24.5	24.4
<b><u>Paper</u></b>		
Component Type	Citrate	Citrate
Component Percent	0.8	0.8
Permeability, ml/cm <sup>2</sup> x min.	28	28
<b><u>Filter</u></b>		
Type	CA	CA
RTD, mm of H <sub>2</sub> O	133	133
Length, mm	30.5	30.5
Weight, g	0.19	0.19
Tipping paper length, mm	35	35
Ventilation, %	49	35
Type/Rows of Holes	Hauni Laser/1	Hauni Laser/1
<b><u>Filler</u></b>		
Total Alkaloids, % (DWB)	1.97	1.95
Total red. Sugars, % (DWB)	6.2	6.1
Wt. of Tob., g (12.5% OV)	0.688	0.677
Rod Density, g/cc	0.207	0.207
Reconstituted Tob., %	24	24
E.S., %	None	None
Expanded Tobacco, %	24	24

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# CIGARETTES ON MARKET WITH TAR AND NICOTINE DATA LISTED ON PACK

	<u>Tar, mg/cigt.</u>			<u>Nicotine, mg/cigt.</u>		
	<u>Listed On Package</u>	<u>FTC Data<sup>1</sup></u>	<u>CI Data</u>	<u>Listed On Package</u>	<u>FTC Data<sup>1</sup></u>	<u>CI Data</u>
<b><u>PHILIP MORRIS</u></b>						
B&H DeLuxe Ultra Lts 100 (Box)	6	5	6	0.6	0.5	0.5
B&H DeLuxe Ultra Lts Men. 100 (Box)	6	5	6	0.6	0.4	0.5
Cambridge Lowest King Size	1	-	1	-	-	0.2
Cambridge Lowest 100	2	-	2	-	-	0.2
Merit Ultra Lights King Size	5	4	5	0.5	0.4	0.5
Merit Ultra Lights King Size (Box)	5	4	5	0.5	0.5	0.4
Merit Ultra Lights Men. King Size	5	5	5	0.5	0.5	0.4
Merit Ultra Lights 100	6	5	5	0.6	0.5	0.5
Merit Ultra Lights 100 (Box)	6	6	6	0.6	0.6	0.5
Merit Ultra Lights Men. 100	6	5	5	0.6	0.5	0.5
Merit King Size	8	7	8	0.6	0.6	0.6
Merit King Size (Box)	8	7	8	0.6	0.6	0.6
Merit Menthol King Size	8	8	8	0.6	0.6	0.6
Merit 100	10	9	10	0.8	0.7	0.8
Merit Menthol 100	10	9	10	0.8	0.8	0.8
<b><u>AMERICAN</u></b>						
Ultra Carlton King Size (Box)	0.01	<0.5	0.2	0.002	<0.05	0.00
Carlton Menthol King Size	1	1	1	0.1	0.1	0.2
Carlton 100 (Box)	1	1	1	0.1	0.1	0.2
Carlton 100 Menthol (Box)	1	1	1	0.1	0.1	0.2
Carlton King Size	1	1	1	0.1	0.1	0.2
Carlton Menthol 100	1	3	3	0.1	0.3	0.3
Carlton 100	2	2	2	0.2	0.2	0.2
Carlton Menthol 120	5	5	5	0.5	0.5	0.5
Carlton 120	5	5	6	0.5	0.5	0.5
Lucky Strike Lights King Size	8	8	8	-	0.7	0.7
Lucky Strike Lights 100	9	9	11	-	0.8	0.9
Tareyton Lights King Size	5	5	6	-	0.5	0.5
<b><u>BROWN &amp; WILLIAMSON</u></b>						
Barclay King Size	3	-	3 <sup>2</sup>	-	-	0.3 <sup>2</sup>
Barclay 100	5	-	5 <sup>2</sup>	-	-	0.4 <sup>2</sup>
Barclay King Size (Box)	3	-	2 <sup>2</sup>	-	-	0.2 <sup>2</sup>
<b><u>LORILLARD</u></b>						
Triumph Menthol King Size	2	3	4	0.3	0.3	0.4
Triumph King Size	3	3	4	0.4	0.3	0.4
Triumph 100	4	5	5	0.5	0.5	0.5
Triumph Menthol 100	4	4	5	0.5	0.4	0.5
<b><u>REYNOLDS</u></b>						
Now King Size	1	1	1	-	0.1	0.2
Now Menthol King Size	1	2	1	-	0.2	0.1
Now 100	2	2	2	-	0.2	0.2
Now Menthol 100	2	2	2	-	0.2	0.2
Vantage Ultra Lights King Size	5	5	5	-	0.4	0.5
Vantage Ultra Lights 100	5	5	5	-	0.4	0.5

<sup>1</sup>FTC data published April 1992.

<sup>2</sup>These products were smoked using the new Coresta holder designed for channel ventilated cigarettes.

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**PHILIP MORRIS DATA**  
**CIGARETTE BRANDS RANKED ACCORDING TO SIZE AND SALES<sup>1</sup>**

	Sales	Tar, mg/cigt.	Nicotine, mg/cigt.		Sales	Tar, mg/cigt.	Nicotine, mg/cigt.
<b>100 MM FILTER PLAIN</b>				<b>100 MM FILTER MENTHOL (CONT.)</b>			
MARLBORO LIGHTS	3.68	11.2	0.87	B & H LIGHTS	0.87	11.0	0.84
MARLBORO LIGHTS (BOX)	3.16	11.1	0.85	CAMBRIDGE LIGHTS	0.69	11.2	0.83
MARLBORO	2.87	15.6	1.17	Doral Full Flavor	0.52	15.1	1.18
Winston	2.30	17.0	1.20	Now	0.50	2.1	0.22
Winston Lights	2.16	10.5	0.79	Montclair Lights	0.45	11.6	0.97
Doral Lights	2.02	11.4	0.98	ALPINE LIGHTS	0.39	9.7	0.77
Doral Full Flavor	1.51	15.0	1.18	BRISTOL LIGHTS	0.38	10.6	0.95
B & H DELUXE ULTRA LTS (BOX)	1.29	5.5	0.47	ALPINE	0.30	15.1	1.06
BENSON & HEDGES	1.24	16.2	1.18	Sterling Lights	0.30	9.5	0.79
Doral Ultra Lights	1.21	5.6	0.52	Sterling	0.28	15.6	1.12
CAMBRIDGE LIGHTS	1.19	11.6	0.86	MERIT	0.20	10.2	0.76
MERIT	1.12	10.1	0.80	Pyramid Lights	0.20	11.0	0.96
Carlton	0.92	2.2	0.24	BENSON & HEDGES (BOX)	0.19	15.9	1.12
B & H LIGHTS	0.87	11.1	0.83	Salem Lights (Box)	0.14	11.6	0.91
CAMBRIDGE ULTRA LOW TAR	0.87	5.7	0.49	Raleigh Extra Lights	0.13	9.4	0.78
Now	0.86	2.3	0.24	Newport Lights	0.11	8.5	0.75
CAMBRIDGE FULL FLAVOR	0.82	16.2	1.16	Sterling Ultra Lights	0.09	4.8	0.47
Vantage	0.78	8.7	0.69	Vantage	0.09	8.6	0.65
Montclair	0.69	15.9	1.18	Style Lights (Box)	0.08	10.9	0.87
Vantage Ultra Lights	0.67	4.8	0.48	Pyramid Full Flavor	0.07	16.1	1.37
Viceroy	0.66	17.4	1.34				
Montclair Lights	0.65	12.2	0.97	<b>100 MM FILTER SLIM</b>			
Winston Ultra Lights	0.63	4.6	0.47	VIRGINIA SLIMS	1.02	14.6	1.07
Pall Mall (Gold)	0.62	14.5	1.21	VA SLIMS LIGHTS (BOX)	0.89	8.9	0.70
Carlton (Box)	0.61	1.3	0.15	Misty Lights Slims (Box)	0.77	8.9	0.76
BRISTOL LIGHTS	0.60	10.6	0.86	VA SLIMS UL (BOX)	0.71	5.8	0.50
BRISTOL FULL FLAVOR	0.58	15.8	1.10	Capri (Box)	0.43	9.3	0.76
Kent	0.58	12.8	0.99	Misty Slims Full Flavor (Box)	0.27	14.3	1.09
MERIT ULTRA LIGHTS	0.50	6.0	0.52	VA SLIMS SUPERSLIMS (BOX)	0.17	5.9	0.51
Camel Lights	0.48	10.2	0.76	More Lights (Box)	0.07	10.2	0.81
Raleigh Extra	0.46	15.8	1.04				
Sterling Lights	0.45	10.8	0.86	<b>100 MM FILTER SLIM MENTHOL</b>			
Montclair Ultra Lights	0.44	6.2	0.56	Salem Slim Lights (Box)	1.06	9.1	0.72
Pyramid Lights	0.44	11.0	0.94	VA SLIMS LIGHTS (BOX)	1.02	9.0	0.70
Raleigh Extra Lights	0.37	12.2	0.88	VIRGINIA SLIMS	0.90	14.9	1.07
Pyramid Ultra Lights	0.36	5.4	0.54	Misty Lights Slims (Box)	0.78	8.9	0.78
Viceroy Lights	0.34	12.5	0.96	VA SLIMS UL (BOX)	0.57	6.1	0.52
BRISTOL ULTRA LIGHTS	0.33	5.6	0.54	Misty Slims Full Flavor (Box)	0.28	14.6	1.13
Sterling	0.32	15.1	1.09	VA SLIMS SUPERSLIMS (BOX)	0.24	6.7	0.54
BENSON & HEDGES (BOX)	0.25	15.8	1.16	More Lights (Box)	0.06	9.6	0.73
Pyramid Full Flavor	0.24	15.8	1.35				
Sterling Ultra Lights	0.17	4.4	0.43	<b>120 MM FILTER PLAIN</b>			
Style Lights	0.17	11.2	0.93	VA SLIMS LIGHTS (BOX)	0.75	13.9	1.08
CAMBRIDGE LOWEST	0.16	1.8	0.21	More	0.67	17.0	1.35
Raleigh Extra Ultra Lights	0.16	6.3	0.53	Carlton	0.29	5.5	0.54
Winston Lights (Box)	0.16	9.1	0.75	SARATOGA (BOX)	0.24	14.6	1.11
Camel Ultra Lights (Box)	0.09	6.4	0.61	More White Lights	0.14	12.5	1.00
L & M	0.08	11.4	0.97				
Style Lights (Box)	0.08	11.2	0.91	<b>120 MM FILTER MENTHOL</b>			
				More	0.64	16.9	1.43
<b>100 MM FILTER MENTHOL</b>				VA SLIMS LIGHTS (BOX)	0.53	14.7	1.30
Salem Lights	2.02	9.0	0.74	Carlton	0.13	4.9	0.51
Salem	1.93	16.6	1.23	SARATOGA (BOX)	0.11	14.5	1.05
Newport	1.73	18.3	1.39	More White Lights	0.10	12.7	1.10
BENSON & HEDGES	1.60	15.7	1.12				
Kool	1.55	16.3	1.24				
Doral Lights	1.15	10.0	0.85				
Salem Ultra Lights	1.02	5.5	0.54				
B & H DELUXE ULTRA LTS (BOX)	0.97	5.5	0.47				

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

**PHILIP MORRIS DATA**  
**CIGARETTE BRANDS RANKED ACCORDING TO SIZE AND SALES<sup>1</sup>**

	Sales	Tar, mg/cigt.	Nicotine, mg/cigt.		Sales	Tar, mg/cigt.	Nicotine, mg/cigt.
<b><u>KING SIZE FILTER PLAIN</u></b>				<b><u>KING SIZE FILTER MENTHOL</u></b>			
<b><u>MARLBORO LIGHTS (BOX)</u></b>	10.17	11.0	0.81	Newport	4.05	16.8	1.24
<b><u>MARLBORO</u></b>	9.79	15.8	1.12	Kool	3.97	16.2	1.11
<b><u>MARLBORO LIGHTS</u></b>	8.70	10.8	0.81	Salem	3.06	16.0	1.22
Winston	6.55	17.4	1.50	Salem Lights	2.93	10.3	0.74
Winston Lights	3.43	10.0	0.75	Kool Milds	1.03	11.8	0.92
Camel Lights	2.02	10.6	0.81	Salem Ultra Lights	0.77	4.9	0.45
Camel	1.84	14.6	1.07	Kool (Box)	0.68	15.5	1.09
Vantage	1.59	8.7	0.68	Doral Lights	0.67	9.6	0.81
Doral Lights	1.52	9.6	0.81	<b><u>MARLBORO</u></b>	0.47	15.1	1.00
<b><u>MERIT</u></b>	1.38	8.1	0.64	Newport Lights	0.45	9.4	0.75
<b><u>MARLBORO MEDIUM (BOX)</u></b>	1.37	12.2	0.88	Doral Full Flavor	0.41	14.8	1.11
Doral Full Flavor	1.19	14.8	1.13	<b><u>MARLBORO LIGHTS (BOX)</u></b>	0.33	10.2	0.75
Camel Lights (Box)	1.09	10.3	0.74	<b><u>CAMBRIDGE LIGHTS</u></b>	0.30	11.3	0.82
Viceroy	1.03	16.5	1.20	Vantage	0.29	8.6	0.66
Winston (Box)	0.93	18.0	1.32	<b><u>ALPINE LIGHTS</u></b>	0.26	9.5	0.74
Camel (Box)	0.92	18.2	1.33	<b><u>ALPINE</u></b>	0.24	14.5	0.97
<b><u>CAMBRIDGE LIGHTS</u></b>	0.84	11.2	0.83	Belair	0.23	10.5	0.81
Kent	0.81	12.6	0.91	<b><u>MERIT</u></b>	0.23	8.0	0.64
<b><u>MARLBORO MEDIUM</u></b>	0.69	12.0	0.88	Carlton	0.20	1.3	0.17
Carlton	0.68	1.3	0.15	<b><u>BRISTOL LIGHTS</u></b>	0.19	10.5	0.87
<b><u>CAMBRIDGE FULL FLAVOR</u></b>	0.65	16.1	1.10	Montclair Lights	0.17	11.4	0.90
Vantage Ultra Lights	0.65	5.4	0.51	Now	0.12	0.9	0.13
Winston Select	0.63	18.2	1.43	Raleigh Extra Lights	0.09	9.5	0.71
Winston Select (Box)	0.59	18.7	1.48	Pyramid Full Flavor	0.07	14.7	1.20
Magna	0.56	14.0	1.00	Sterling Menthol	0.06	14.1	1.05
True	0.56	4.3	0.43	Sterling Lights	0.05	10.1	0.79
Winston Ultra Lights	0.56	6.3	0.60				
<b><u>BRISTOL FULL FLAVOR</u></b>	0.51	15.4	1.01	<b><u>LONG SIZE FILTER (BOX)</u></b>			
Doral Ultra Lights	0.49	5.6	0.52	<b><u>MARLBORO (BOX)</u></b>	14.62	15.8	1.10
<b><u>BRISTOL LIGHTS</u></b>	0.48	10.7	0.88	Newport Menthol (Box)	3.20	15.7	1.14
<b><u>MERIT ULTRA LIGHTS (BOX)</u></b>	0.43	4.7	0.44	<b><u>PARLIAMENT LIGHTS (BOX)</u></b>	0.80	8.8	0.69
Raleigh Extra	0.41	16.7	1.06	Camel Lights Wides (Box)	0.50	11.2	0.94
Magna (Box)	0.40	13.8	0.98				
Winston Lights (Box)	0.40	9.8	0.73	<b><u>KING SIZE NONFILTER</u></b>			
Montclair	0.37	15.2	1.17	Pall Mall	3.03	24.0	1.71
L & M	0.34	12.5	1.02	Chesterfield King	0.30	20.3	1.40
Montclair Lights	0.34	11.8	0.93	<b><u>BRISTOL</u></b>	0.18	25.1	1.72
Pyramid Lights	0.34	10.6	0.83	<b><u>COMMANDER</u></b>	0.09	24.2	1.70
<b><u>PARLIAMENT LIGHTS</u></b>	0.33	9.5	0.71				
Magna Lites	0.31	10.7	0.84	<b><u>REGULAR NONFILTER</u></b>			
Now	0.31	1.2	0.15	Camel	2.47	20.9	1.51
<b><u>BUCKS</u></b>	0.30	14.0	1.03	Lucky Strike	0.81	25.0	1.74
Raleigh Extra Lights	0.28	10.8	0.76				
<b><u>BUCKS LIGHTS</u></b>	0.24	10.3	0.74	<b><u>100 MM FILTER CHARCOAL</u></b>			
Pyramid Full Flavor	0.21	14.5	1.20	<b><u>PARLIAMENT LIGHTS</u></b>	0.74	12.1	1.13
Magna Lites (Box)	0.20	10.6	0.77	Lark Lights	0.11	11.8	0.99
Bull Durham (Box)	0.19	14.2	1.05				
Bull Durham Lights (Box)	0.16	10.7	0.86	<b><u>KING SIZE FILTER CHARCOAL</u></b>			
Barclay	0.16	3.4	0.32	Tareyton	0.55	14.6	1.05
Camel Ultra Lights	0.14	5.7	0.57	Lark Lights	0.14	11.4	0.88
Viceroy Lights (Box)	0.11	11.2	0.84				
Camel Ultra Lights (Box)	0.10	5.9	0.56				
Raleigh Extra Ultra Lights	0.09	6.2	0.50				
Sterling Lights	0.08	9.6	0.75				
<b><u>CAMBRIDGE LOWEST</u></b>	0.07	1.2	0.15				
Sterling	0.07	13.6	0.99				

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**FEDERAL TRADE COMMISSION DATA PUBLISHED APRIL, 1992**  
**ALPHABETICAL LISTING OF BRANDS WITH TAR AND NICOTINE CONTENT**

Tar and Nicotine Content of Two Hundred Sixty Two (262) Varieties of Domestic Cigarettes

Brand	Type*	Tar, mg/cigt.	Nicotine, mg/cigt.	Brand	Type	Tar, mg/cigt.	Nicotine, mg/cigt.
ALPINE	F,M,SP, 85 mm	16	1.1	Doral Ultra Lights	F,SP,100mm	5	0.5
ALPINE	F,M,SP,100 mm	15	1.1	Doral Ultra Lights	F,SP,85mm	5	0.5
ALPINE LIGHTS	F,M,SP, 85mm	9	0.7	Enligh Ovals	NF,HP,70mm	23	1.9
ALPINE LIGHTS	F,M,SP,100mm	9	0.8	Eve Lights	F,HP,120mm	12	1.0
American Full Flavor	F,SP,85mm	16	1.2	Eve Ultra Lights (Box)	F,HP,100mm	6	0.7
American Full Flavor	F,SP,100mm	16	1.2	Eve Ultra (Box)	F,HP,120mm	5	0.5
American Lights	F,SP,85mm	11	0.9	Eve Ultra Lights (Box)	F,M,HP,120mm	5	0.5
American Lights	F,SP,100mm	11	1.0	Eve Lights	F,M,HP,120mm	11	1.0
Belair	F,M,SP,85mm	15	1.2	Herbert Tareyton	NF,SP,85mm	24	1.6
Belair	F,M,SP,100mm	14	1.2	Kent Golden Lights	F,SP,85mm	7	0.7
BENSON & HEDGES	F,HP, 85mm	15	1.3	Kent Golden Lights	F,M,SP,85mm	9	0.8
BENSON & HEDGES	F,HP,100mm	16	1.2	Kent Golden Lights	F,HP,100mm	8	0.7
BENSON & HEDGES	F,M,HP,100mm	16	1.2	Kent Golden Lights	F,SP,100mm	8	0.8
BENSON & HEDGES	F,SP,100mm	16	1.2	Kent Golden Lights	F,M,SP,100mm	8	0.7
BENSON & HEDGES	F,M,SP,100mm	16	1.2	Kent Golden Lts. (Box)	F,HP,80mm	8	0.7
BENSON & HEDGES LTS	F,SP,100mm	10	0.8	Kent	F,HP,80mm	11	0.8
BENSON & HEDGES LTS	F,M,SP,100mm	10	0.8	Kent	F,SP,85mm	12	0.9
B & H LIGHTS (BOX)	F,HP,100mm	11	0.9	Kent	F,SP,100mm	13	1.0
B & H LTS MEN. (BOX)	F,M,HP,100mm	10	0.8	Kent	F,M,SP,100mm	12	0.9
B & H DELUXE U.L.	F,HP,100mm	5	0.5	Kent III Ultra Lights	F,SP,85mm	3	0.3
B & H DELUXE U.L.	F,M,HP,100mm	5	0.4	Kent III Ultra Lights	F,HP,100mm	5	0.5
B & H MULTIFILTER	F,SP,85mm	11	0.9	Kent III Ultra Lights	F,SP,100mm	5	0.5
BRISTOL	NF,SP,85mm	22	1.4	Kool	NF,M,SP,70mm	21	1.3
BRISTOL ULTRA LIGHTS	F,SP,100mm	6	0.5	Kool	F,M,HP,85mm	16	1.1
BRISTOL LIGHTS	F,SP,85mm	11	0.8	Kool	F,M,SP,85mm	16	1.2
BRISTOL LIGHTS	F,M,SP,85mm	11	0.8	Kool	F,M,SP,100mm	16	1.3
BRISTOL LIGHTS	F,SP,100mm	11	0.8	Kool Lights	F,M,SP,85mm	8	0.7
BRISTOL LIGHTS	F,M,SP,100mm	11	0.9	Kool Lights	F,M,SP,100mm	8	0.7
Bull Durham (Box)	F,HP,85mm	14	1.1	Kool Milds	F,M,HP,85mm	12	0.9
Bull Durham Lts. (Box)	F,HP,85mm	10	0.9	Kool Milds	F,M,SP,85mm	12	0.9
CAMBRIDGE F.F.	F,SP,85mm	17	1.1	Kool Milds	F,M,SP,100mm	12	1.0
CAMBRIDGE F.F.	F,SP,100mm	17	1.2	L & M	F,SP,85mm	14	1.0
CAMBRIDGE LIGHTS	F,SP,85mm	12	0.9	L & M	F,SP,100mm	17	1.4
CAMBRIDGE LIGHTS	F,M,SP,85mm	12	0.9	L & M	F,HP,85mm	14	1.1
CAMBRIDGE LIGHTS	F,SP,100mm	12	0.9	L & M Long Lights	F,SP,100mm	8	0.8
CAMBRIDGE LIGHTS	F,M,SP,100mm	11	0.9	Lark Lights	F,C,SP,85mm	12	0.9
CAMBRIDGE U.LOW TAR	F,SP,100mm	4	0.4	Lark Lights	F,C,SP,100mm	12	1.1
Camel	NF,SP,70mm	22	1.4	Lucky Strike	NF,SP,70mm	24	1.6
Camel	F,HP,85mm	16	1.0	Lucky Strike	F,HP,85mm	13	1.0
Camel	F,SP,85mm	14	1.0	Lucky Strike	F,SP,85mm	13	1.0
Camel Lights	F,HP,85mm	9	0.6	Lucky Strike	F,M,SP,100mm	12	1.0
Camel Lights	F,SP,85mm	11	0.8	Lucky Strike Lights	F,SP,85mm	8	0.7
Camel Lights	F,SP,100mm	10	0.8	Lucky Strike Lights	F,SP,100mm	9	0.8
Camel Ultra Lights	F,SP,85mm	6	0.6	Magna	F,HP,85mm	14	0.9
Camel Ultra Lights (Box)	F,HP,85mm	6	0.5	Magna	F,SP,85mm	13	0.9
Camel Ultra Lights (Box)	F,HP,100mm	6	0.6	Magna Lites	F,SP,85mm	11	0.7
Capri	F,HP,100mm	9	0.8	Magna Lites	F,HP,85mm	9	0.6
Capri	F,M,HP,100mm	9	0.7	Malibu	F,SP,100mm	15	1.2
Ultra Carlton	F,HP,85mm	<0.5	<0.05	Malibu Lights	F,SP,85mm	11	0.7
Carlton	F,SP,85mm	1	0.1	Malibu Lights	F,SP,100mm	9	0.8
Carlton	F,M,SP,85mm	1	0.1	Malibu Ultra Lights	F,SP,100mm	5	0.5
Carlton	F,HP,100mm	1	0.1	MARLBORO	F,HP,80mm	16	1.1
Carlton	F,M,HP,100mm	1	0.1	MARLBORO	F,SP,85mm	16	1.1
Carlton	F,SP,100mm	2	0.2	MARLBORO	F,M,SP,85mm	16	1.2
Carlton	F,M,SP,100mm	3	0.3	MARLBORO	F,HP,100mm	16	1.2
Carlton	F,SP,120mm	5	0.5	MARLBORO	F,SP,100mm	16	1.2
Carlton	F,M,SP,120mm	5	0.5	MARLBORO 25's	F,SP,85mm	16	1.1
Century 25's	F,SP, 85mm	15	1.0	MARLBORO LIGHTS	F,HP,85mm	11	0.8
Century 25's	F,SP,100mm	15	1.1	MARLBORO LIGHTS	F,SP,85mm	11	0.9
Century Lights 25's	F,SP,85mm	8	0.7	MARLBORO LIGHTS	F,HP,100mm	10	0.8
Century Lights 25's	F,SP,100mm	11	0.9	MARLBORO LIGHTS	F,M,HP,85mm	9	0.8
Chesterfield	NF,SP,70mm	18	1.2	MARLBORO LIGHTS	F,SP,100mm	10	0.8
Chesterfield	NF,SP,85mm	22	1.5	MARLBORO LIGHTS	F,M,HP,100mm	9	0.8
COMMANDER KING SIZE	NF,SP,85mm	26	1.7	MARLBORO LTS 25's	F,SP,85mm	11	0.9
COMMANDER REG.	NF,SP,70mm	22	1.4	Max	F,SP,120mm	15	1.2
Doral Full Flavor	F,SP,85mm	15	1.1	Max	F,M,SP,120mm	15	1.2
Doral Full Flavor	F,M,SP,85mm	15	1.1	MERIT	F,HP,85mm	7	0.6
Doral Full Flavor	F,M,SP,100mm	15	1.1	MERIT	F,SP,85mm	7	0.6
Doral Full Flavor	F,SP,100mm	15	1.1	MERIT	F,M,SP,85mm	8	0.6
Doral Filter Lights	F,SP,85mm	9	0.8	MERIT	F,SP,100mm	9	0.7
Doral Filter Lights	F,M,SP,85mm	9	0.7	MERIT	F,M,SP,100mm	9	0.8
Doral Filter Lights	F,SP,100mm	10	0.9	MERIT ULTRA LIGHTS	F,SP,85mm	4	0.4
Doral Filter Lights	F,M,SP,100mm	9	0.7	MERIT ULTRA LIGHTS	F,HP,85mm	4	0.5

\*f = Filter; NF = Nonfilter; C = Charcoal; M = Menthol; HP = Hard Pack; SP = Soft Pack; mm = Millimeter

FEDERAL TRADE COMMISSION DATA PUBLISHED APRIL, 1992  
ALPHABETICAL LISTING OF BRANDS WITH TAR AND NICOTINE CONTENT

Brand	Type*	Tar, mg/cigt.	Nicotine, mg/cigt.	Brand	Type	Tar, mg/cigt.	Nicotine, mg/cigt.
MERIT ULTRA LIGHTS	F,M,SP,85mm	5	0.5	Raleigh Extra Lights	F,M,SP,100mm	9	0.8
MERIT ULTRA LIGHTS	F,SP,100mm	5	0.5	Raleigh Lights	F,SP,85mm	11	0.9
MERIT ULTRA LIGHTS	F,HP,100mm	6	0.6	Raleigh Lights	F,SP,100mm	12	0.9
MERIT ULTRA LIGHTS	F,M,SP,100mm	5	0.5	Richland 25's	F,SP,85mm	17	1.2
Misty Lights Slims (Box)	F,M,HP,100mm	8	0.7	Richland 25's	F,SP,100mm	17	1.3
Misty Lights Slims (Box)	F,HP,100mm	8	0.7	Richland Lights 25's	F,SP,85mm	11	0.9
Montclair	F,SP,85mm	12	1.0	Richland Lights 25's	F,SP,100mm	13	1.0
Montclair Ultra Lights	F,SP,100mm	6	0.6	Salem	F,M,SP,85mm	17	1.2
Montclair	F,SP,100mm	15	1.2	Salem	F,M,SP,100mm	16	1.2
Montclair Lights	F,M,SP,100mm	11	1.0	Salem Lights	F,M,SP,85mm	9	0.7
More	F,SP,120mm	16	1.2	Salem Lights	F,M,HP,100mm	11	0.9
More	F,M,SP,120mm	16	1.3	Salem Lights	F,M,SP,100mm	8	0.7
More Lights	F,HP,100mm	9	0.7	Salem Slim Lights	F,M,HP,100mm	8	0.7
More Lights	F,M,HP,100mm	8	0.7	Salem Ultra Lights	F,M,SP,85mm	5	0.4
More White Lights	F,M,SP,120mm	10	0.8	Salem Ultra Lights	F,M,SP,100mm	4	0.4
More White Lights	F,SP,120mm	10	0.8	SARATOGA	F,HP,120mm	15	1.2
Newport	F,M,HP,80mm	15	1.1	SARATOGA	F,M,HP,120mm	14	1.1
Newport	F,M,SP,85mm	16	1.2	Satin	F,SP,100mm	11	0.9
Newport	F,M,HP,100mm	18	1.4	Satin	F,M,SP,100mm	11	0.9
Newport	F,M,SP,100mm	18	1.4	Silva Thins	F,SP,100mm	12	1.0
Newport 25's	F,M,SP,85mm	16	1.2	Silva Thins	F,M,SP,100mm	12	1.1
Newport 25's	F,M,SP,100mm	18	1.4	Spring	F,M,SP,100mm	18	1.4
Newport Lights	F,M,HP,80mm	8	0.7	Sterling Lights	F,M,SP,100mm	9	0.8
Newport Lights	F,M,SP,85mm	8	0.7	Sterling	F,SP,100mm	16	1.1
Newport Lights	F,M,HP,100mm	8	0.7	Sterling Lights	F,SP,100mm	10	0.8
Newport Lights	F,M,SP,100mm	8	0.8	Sterling	F,M,SP,100mm	17	1.2
Newport Stripes	F,HP,100mm	11	0.9	Tall	F,SP,120mm	18	1.6
Newport Stripes	F,M,HP,100mm	11	0.9	Tall	F,M,SP,120mm	17	1.5
Now	F,HP,80mm	<0.5	<0.05	Tareyton	F,C,SP,85mm	14	1.0
Now	F,SP,85mm	1	0.1	Tareyton	F,C,SP,100mm	14	1.0
Now	F,M,SP,85mm	2	0.2	Tareyton Lights	F,C,SP,85mm	5	0.5
Now	F,SP,100mm	2	0.2	Tareyton Long Lts.	F,C,SP,100mm	7	0.7
Now	F,M,SP,100mm	2	0.2	Triumph	F,SP,85mm	3	0.3
Old Gold Straights	NF,SP,85mm	26	1.8	Triumph	F,M,SP,85mm	3	0.3
Old Gold Filters	F,SP,85mm	16	1.2	Triumph	F,SP,100mm	5	0.5
Old Gold Filters	F,SP,100mm	18	1.4	Triumph	F,M,SP,100mm	4	0.4
Old Gold Lights	F,SP,85mm	8	0.7	True	F,SP,85mm	4	0.4
Pall Mall	NF,SP,85mm	25	1.7	True	F,M,SP,85mm	4	0.4
Pall Mall Gold	F,SP,100mm	15	1.2	True	F,SP,100mm	6	0.6
Pall Mall Lights	F,SP,100mm	9	0.8	True	F,M,SP,100mm	7	0.6
Pall Mall Red	F,SP,85mm	15	1.2	Vantage	F,SP,85mm	8	0.6
Pall Mall Red	F,SP,100mm	15	1.2	Vantage	F,M,SP,85mm	9	0.7
PARLIAMENT LIGHTS	F,HP,80mm	9	0.7	Vantage	F,SP,100mm	8	0.7
PARLIAMENT LIGHTS	F,SP,85mm	9	0.7	Vantage	F,M,SP,100mm	8	0.6
PARLIAMENT LIGHTS	F,C,SP,100m	12	1.0	Vantage Ultra Lights	F,SP,85mm	5	0.4
PLAYERS	NF,HP,70mm	25	1.8	Vantage Ultra Lights	F,SP,100mm	5	0.4
PLAYERS	F,HP,85mm	11	0.9	Viceroy	F,SP,85mm	17	1.3
PLAYERS	F,M,HP,85mm	11	0.9	Viceroy (Box)	F,HP,85mm	16	1.2
PLAYERS	F,HP,100mm	13	1.1	Viceroy Lights (Box)	F,HP,85mm	11	0.9
PLAYERS	F,M,HP,100mm	14	1.1	Viceroy Lights	F,SP,85mm	11	0.9
PLAYERS LIGHTS 25's	F,SP,85mm	10	0.8	Viceroy Lights	F,SP,100mm	13	1.0
PLAYERS LIGHTS 25's	F,M,SP,85mm	10	0.8	VIRGINIA SLIMS	F,SP,100mm	14	1.1
PLAYERS LIGHTS 25's	F,SP,100mm	11	0.9	VIRGINIA SLIMS	F,M,SP,100mm	14	1.1
PLAYERS LIGHTS 25's	F,M,SP,100mm	11	0.9	VIRGINIA SLIMS LTS	F,HP,100mm	8	0.7
Pyramid	NF,SP,85mm	21	1.4	VIRGINIA SLIMS LTS	F,M,HP,100mm	8	0.7
Pyramid Full Flavor	F,SP,85mm	14	1.1	VIRGINIA SLIMS LTS	F,HP,120mm	13	1.1
Pyramid Full Flavor	F,M,SP,85mm	14	1.1	VIRGINIA SLIMS LTS	F,M,HP,120mm	13	1.1
Pyramid Full Flavor	F,SP,100mm	15	1.2	VA SLIMS SUPERSLIMS	F,HP,100mm	6	0.5
Pyramid Full Flavor	F,M,SP,100mm	14	1.2	VA SLIMS SUPERSLIMS	F,M,HP,100mm	5	0.5
Pyramid Lights	F,SP,85mm	10	0.8	VA SLIMS ULTRA LTS	F,HP,100mm	5	0.5
Pyramid Ultra Lights	F,SP,100mm	5	0.5	VA SLIMS ULTRA LTS	F,M,HP,100mm	5	0.4
Pyramid Lights	F,SP,100mm	10	0.9	Winston	F,HP,80mm	15	1.0
Pyramid Lights	F,M,SP,100mm	10	0.8	Winston	F,SP,85mm	16	1.1
Raleigh	NF,SP,85mm	24	1.5	Winston	F,SP,100mm	16	1.1
Raleigh	F,SP,85mm	14	0.9	Winston Lights	F,HP,80mm	9	0.6
Raleigh	F,SP,100mm	15	1.0	Winston Lights	F,SP,85mm	10	0.7
Raleigh Extra Lights	F,SP,85mm	11	0.7	Winston Lights	F,HP,100mm	10	0.7
Raleigh Extra	F,SP,85mm	18	1.1	Winston Lights	F,SP,100mm	10	0.8
Raleigh Extra	F,SP,100mm	16	1.0	Winston Ultra Lights	F,SP,85mm	5	0.5
Raleigh Extra Lights	F,SP,100mm	12	0.8	Winston Ultra Lights	F,SP,100mm	5	0.4

TAR  
RANKING

2050250403



PHILIP MORRIS DATA  
BRANDS RANKED ACCORDING TO FTC TAR

Brand	Size	Tar, mg/cigt.	Nicotine, mg/cigt.	Brand	Size	Tar, mg/cigt.	Nicotine, mg/cigt.
1. Now (Box)	KF	0.1	0.00	41. <u>B &amp; H DELUXE ULTRA LTS (BOX)</u>	100M	5.5	0.47
2. Ultra Carlton (Box)	KF	0.2	0.00	42. Carlton	120	5.5	0.54
3. Now	KFM	0.9	0.12	43. Salem Ultra Lights	100M	5.5	0.54
4. <u>CAMBRIDGE LOWEST</u>	KF	1.2	0.15	44. Doral Ultra Lights	KF	5.6	0.52
5. Now	KF	1.2	0.15	45. Doral Ultra Lights	100	5.6	0.52
6. Carlton	KF	1.3	0.15	46. <u>BRISTOL ULTRA LIGHTS</u>	100	5.6	0.54
7. Carlton (Box)	100	1.3	0.15	47. Eve Ultra Lights (Box)	100	5.6	0.56
8. Carlton (Box)	100M	1.3	0.15	48. <u>CAMBRIDGE ULTRA LOW TAR</u>	100	5.7	0.49
9. Carlton	KFM	1.3	0.17	49. Kool Ultra	KFM	5.7	0.50
10. <u>CAMBRIDGE LOWEST</u>	100	1.8	0.21	50. Camel Ultra Lights	KF	5.7	0.57
11. Now	100M	2.1	0.22	51. Tareyton Lights	KFC	5.8	0.50
12. Carlton	100	2.2	0.24	52. <u>VIRGINIA SLIMS ULTRA LTS</u>	100	5.8	0.50
13. Now	100	2.3	0.24	53. <u>VA SLIMS SUPERSLIMS (BOX)</u>	100	5.9	0.51
14. Barclay (Box)	KF	2.4	0.22	54. Camel Ultra Lights (Box)	KF	5.9	0.56
15. Carlton	100M	2.5	0.26	55. Eve Ultra Lights (Box)	120	5.9	0.57
16. Barclay	KF	3.4	0.32	56. <u>MERIT ULTRA LIGHTS (BOX)</u>	100	6.0	0.52
17. Triumph	KF	3.6	0.36	57. <u>VA SLIMS UL (BOX)</u>	100M	6.1	0.52
18. Kent III Ultra Lights	KF	3.8	0.41	58. Eve Ultra Lights (Box)	120M	6.1	0.60
19. Triumph	KFM	4.1	0.38	59. Raleigh Extra Ultra Lights	KF	6.2	0.50
20. True	KF	4.3	0.43	60. Montclair Ultra Lights	100	6.2	0.56
21. Sterling Ultra Lights	100	4.4	0.43	61. Malibu Ultra Lights	100	6.2	0.57
22. <u>MERIT ULTRA LIGHTS</u>	KFM	4.5	0.44	62. Raleigh Extra Ultra Lights	100	6.3	0.53
23. <u>MERIT ULTRA LIGHTS</u>	KF	4.6	0.46	63. Winston Ultra Lights	KF	6.3	0.60
24. Winston Ultra Lights	100	4.6	0.47	64. Camel Ultra Lights (Box)	100	6.4	0.61
25. Barclay	100	4.7	0.43	65. True	100M	6.6	0.63
26. <u>MERIT ULTRA LIGHTS (BOX)</u>	KF	4.7	0.44	66. <u>VA SLIMS SUPERSLIMS (BOX)</u>	100M	6.7	0.54
27. True	KFM	4.7	0.47	67. Kool Ultra	100M	6.7	0.60
28. Triumph	100	4.8	0.45	68. True	100	7.0	0.64
29. Sterling Ultra Lights Menthol	100M	4.8	0.47	69. Kent Golden Lights (Box)	LF	7.8	0.69
30. Vantage Ultra Lights	100	4.8	0.48	70. <u>MERIT</u>	KFM	8.0	0.64
31. Salem Ultra Lights	KFM	4.9	0.45	71. <u>MERIT (BOX)</u>	KF	8.0	0.64
32. Kent III Ultra Lights (Box)	100	4.9	0.46	72. Lucky Strike Lights	KF	8.0	0.66
33. Carlton	120M	4.9	0.51	73. <u>MERIT</u>	KF	8.1	0.64
34. Kent III Ultra Lights	100	4.9	0.51	74. Kool Lights	100M	8.1	0.67
35. Triumph	100M	5.1	0.45	75. Old Gold Lights	KF	8.1	0.73
36. <u>MERIT ULTRA LTS.</u>	100M	5.3	0.52	76. Kent Golden Lights	KF	8.2	0.71
37. Vantage Ultra Lights	KF	5.4	0.51	77. L&M Long Lights	100	8.2	0.77
38. <u>MERIT ULTRA LIGHTS</u>	100	5.4	0.52	78. Kool Lights	KFM	8.3	0.68
39. Pyramid Ultra Lights	100	5.4	0.54	79. Newport Lights (Box)	LFM	8.3	0.69
40. <u>B &amp; H DELUXE U.L. (BOX)</u>	100	5.5	0.47	80. Kent Golden Lights	KFM	8.3	0.70

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**PHILIP MORRIS DATA**  
**BRANDS RANKED ACCORDING TO FTC TAR**

Brand	Size	Tar, mg/cigt.	Nicotine, mg/cigt.	Brand	Size	Tar, mg/cigt.	Nicotine, mg/cigt.
81. Century Lights 25's	KF	8.5	0.72	121. Sterling Lights Menthol	KFM	10.1	0.79
82. Newport Lights	100M	8.5	0.75	122. <u>MERIT</u>	100	10.1	0.80
83. Vantage	100	8.6	0.65	123. <u>MARLBORO LIGHTS (BOX)</u>	KFM	10.2	0.75
84. Vantage	KFM	8.6	0.66	124. <u>MERIT</u>	100M	10.2	0.76
85. Vantage	KF	8.7	0.68	125. Camel Lights	100	10.2	0.76
86. Vantage	100	8.7	0.69	126. More Lights (Box)	100	10.2	0.81
87. Tareyton Long Lights	100C	8.7	0.74	127. <u>BUCKS LIGHTS</u>	KF	10.3	0.74
88. <u>PARLIAMENT LIGHTS (BOX)</u>	LF	8.8	0.69	128. Salem Lights	KFM	10.3	0.74
89. <u>VA SLIMS LIGHTS (BOX)</u>	100	8.9	0.70	129. Camel Lights (Box)	KF	10.3	0.74
90. Misty Lights Slims (Box)	100	8.9	0.76	130. <u>MARLBORO LIGHTS 25'S</u>	KF	10.4	0.80
91. Misty Lights Slims (Box)	100M	8.9	0.78	131. Winston Lights	100	10.5	0.79
92. Kent Golden Lights (Box)	100	8.9	0.79	132. Belair	KFM	10.5	0.81
93. <u>VA SLIMS LIGHTS (BOX)</u>	100M	9.0	0.70	133. <u>BRISTOL LIGHTS</u>	KFM	10.5	0.87
94. Salem Lights	100M	9.0	0.74	134. Magna Lites	KF	10.6	0.77
95. Newport Lights (Box)	100M	9.0	0.81	135. Camel Lights	KF	10.6	0.81
96. Salem Slim Lights (Box)	100M	9.1	0.72	136. <u>B &amp; H LIGHTS (BOX)</u>	100M	10.6	0.82
97. Winston Lights (Box)	100	9.1	0.75	137. Pyramid Lights	KF	10.6	0.83
98. Capri (Box)	100M	9.2	0.76	138. <u>B &amp; H LIGHTS (BOX)</u>	100	10.6	0.83
99. Capri (Box)	100	9.3	0.76	139. <u>BRISTOL LIGHTS</u>	100	10.6	0.86
100. Newport Lights	KFM	9.4	0.75	140. Malibu Lights	100	10.6	0.88
101. <u>MARLBORO LIGHTS MEN (BOX)</u>	100M	9.4	0.77	141. <u>BRISTOL LIGHTS</u>	100M	10.6	0.95
102. Raleigh Extra Lights	100M	9.4	0.78	142. Magna Lites	KF	10.7	0.84
103. Raleigh Extra Lights Menthol	KFM	9.5	0.71	143. Bull Durham Lights (Box)	KF	10.7	0.86
104. <u>PARLIAMENT LIGHTS</u>	KF	9.5	0.71	144. <u>BRISTOL LIGHTS</u>	KF	10.7	0.88
105. <u>ALPINE LIGHTS</u>	KFM	9.5	0.74	145. Raleigh Extra Lights	KF	10.8	0.76
106. Sterling Lights	100M	9.5	0.79	146. <u>MARLBORO LIGHTS</u>	KF	10.8	0.81
107. Pall Mall Lights	100	9.5	0.82	147. Sterling Lights	100	10.8	0.86
108. Kent Golden Lights	100	9.5	0.84	148. Lucky Strike Lights	100	10.8	0.93
109. More Lights (Box)	100M	9.6	0.73	149. Style Lights Menthol (Box)	100M	10.9	0.87
110. <u>PLAYERS LIGHTS 25'S</u>	KFM	9.6	0.75	150. <u>MARLBORO LIGHTS (BOX)</u>	KF	11.0	0.81
111. Sterling Lights	KF	9.6	0.75	151. <u>B &amp; H LIGHTS</u>	100M	11.0	0.84
112. Doral Lights	KF	9.6	0.81	152. Pyramid Lights	100	11.0	0.94
113. Doral Lights	KFM	9.6	0.81	153. Pyramid Lights	100M	11.0	0.96
114. Kent Golden Lights Men.	100M	9.6	0.84	154. <u>B &amp; H LIGHTS</u>	100	11.1	0.83
115. <u>ALPINE LIGHTS</u>	100M	9.7	0.77	155. <u>PLAYERS (BOX)</u>	KFM	11.1	0.85
116. Belair	100M	9.8	0.69	156. <u>MARLBORO LIGHTS (BOX)</u>	100	11.1	0.85
117. Winston Lights (Box)	KF	9.8	0.73	157. <u>CAMBRIDGE LIGHTS</u>	KF	11.2	0.83
118. <u>PLAYERS LIGHTS 25's</u>	KF	9.9	0.76	158. <u>CAMBRIDGE LIGHTS</u>	100M	11.2	0.83
119. Winston Lights	KF	10.0	0.75	159. Viceroy Lights (Box)	KF	11.2	0.84
120. Doral Lights	100M	10.0	0.85	160. <u>MARLBORO LIGHTS</u>	100	11.2	0.87

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PHILIP MORRIS DATA  
BRANDS RANKED ACCORDING TO FTC TAR

<u>Brand</u>	<u>Size</u>	<u>Tar, mg/cigt.</u>	<u>Nicotine, mg/cigt.</u>	<u>Brand</u>	<u>Size</u>	<u>Tar, mg/cigt.</u>	<u>Nicotine, mg/cigt.</u>
161. <u>B&amp;H MULTIFILTER</u>	KFC	11.2	0.88	201. Viceroy Lights	100	12.5	0.96
162. Style Lights (Box)	100	11.2	0.91	202. Kent	100M	12.5	0.97
163. Style Lights	100	11.2	0.93	203. More White Lights	120	12.5	1.00
164. Century Lights 25's	100	11.2	0.94	204. L&M	KF	12.5	1.02
165. Camel Lights Wides (Box)	LF	11.2	0.94	205. Eve Lights (Box)	120	12.5	1.04
166. <u>CAMBRIDGE LIGHTS</u>	KFM	11.3	0.82	206. Kent	KF	12.6	0.91
167. Silva Thins (Box)	100	11.3	0.96	207. Raleigh Lights	100	12.7	0.95
168. Lark Lights	KFC	11.4	0.88	208. More White Lights	120M	12.7	1.10
169. <u>PLAYERS LIGHTS 25'S</u>	100	11.4	0.88	209. Satin	100M	12.7	1.16
170. Montclair Lights Menthol	KFM	11.4	0.90	210. Kent	100	12.8	0.99
171. American Lights	KF	11.4	0.93	211. Lucky Strike Low Tar	KF	13.3	1.03
172. Silva Thins (Box)	100M	11.4	0.96	212. <u>PLAYERS (BOX)</u>	100	13.4	1.02
173. L&M	100	11.4	0.97	213. <u>PLAYERS (BOX)</u>	100M	13.5	1.02
174. Newport Stripes (Box)	100	11.4	0.97	214. Tareyton	100C	13.5	1.04
175. Doral Lights	100	11.4	0.98	215. Sterling	KF	13.6	0.99
176. Kool Milds (Box)	KFM	11.5	0.88	216. Lucky Strike Low Tar (Box)	KF	13.6	1.05
177. Richland Lights 25's	KF	11.5	0.89	217. Magna (Box)	KF	13.8	0.98
178. Satin	100	11.5	0.98	218. <u>VA SLIMS LIGHTS (BOX)</u>	120	13.9	1.08
179. Raleigh Lights	KF	11.6	0.86	219. Lucky Strike Low Tar	100	13.9	1.19
180. <u>CAMBRIDGE LIGHTS</u>	100	11.6	0.86	220. Magna	KF	14.0	1.00
181. <u>PLAYERS (BOX)</u>	KF	11.6	0.88	221. <u>BUCKS</u>	KF	14.0	1.03
182. Salem Lights (Box)	100M	11.6	0.91	222. <u>MARLBORO (BOX)</u>	100	14.0	1.06
183. Montclair Lights	100M	11.6	0.97	223. Sterling	KFM	14.1	1.05
184. <u>PLAYERS LIGHTS 25'S</u>	100M	11.7	0.87	224. Bull Durham (Box)	KF	14.2	1.05
185. Viceroy Lights	KF	11.7	0.92	225. <u>BENSON &amp; HEDGES (BOX - PP)</u>	KF	14.2	1.21
186. Kool Milds	KFM	11.8	0.92	226. Misty Slims Full Flavor (Box)	100	14.3	1.09
187. Kool Milds	100M	11.8	0.92	227. Raleigh	KF	14.4	0.93
188. Montclair Lights	KF	11.8	0.93	228. American Full Flavor	100	14.4	1.06
189. Lark Lights	100C	11.8	0.99	229. <u>ALPINE</u>	KFM	14.5	0.97
190. Kent (Box)	LF	11.9	0.87	230. <u>SARATOGA (BOX)</u>	120M	14.5	1.05
191. Newport Stripes (Box)	100M	11.9	0.94	231. Pyramid Full Flavor	KF	14.5	1.20
192. <u>MARLBORO MEDIUM</u>	KF	12.0	0.88	232. Pall Mall (Gold)	100	14.5	1.21
193. <u>PARLIAMENT LIGHTS</u>	100C	12.1	1.13	233. Tareyton	KFC	14.6	1.05
194. Raleigh Extra Lights	100	12.2	0.88	234. <u>VIRGINIA SLIMS</u>	100	14.6	1.07
195. <u>MARLBORO MEDIUM (BOX)</u>	KF	12.2	0.88	235. Camel	KF	14.6	1.07
196. L&M (Box)	FK	12.2	0.93	236. <u>SARATOGA (BOX)</u>	120	14.6	1.11
197. Montclair Lights	100	12.2	0.97	237. Misty Slims Full Flavor (Box)	100M	14.6	1.13
198. Eve Lights (Box)	120M	12.2	1.03	238. Pyramid Full Flavor	KFM	14.7	1.20
199. American Lights	100	12.3	1.01	239. <u>VA SLIMS LIGHTS (BOX)</u>	120M	14.7	1.30
200. Richland Lights 25's	100	12.5	0.93	240. Doral Full Flavor	KFM	14.8	1.11

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PHILIP MORRIS DATA  
BRANDS RANKED ACCORDING TO FTC TAR

Brand	Size	Tar, mg/cigt.	Nicotine, mg/cigt.	Brand	Size	Tar, mg/cigt.	Nicotine, mg/cigt.
241. Doral Full Flavor	KF	14.8	1.13	281. Chesterfield	RNF	16.5	1.07
242. <u>VIRGINIA SLIMS</u>	100M	14.9	1.07	282. Viceroy	KF	16.5	1.20
243. Doral Full Flavor	100	15.0	1.18	283. Salem	100M	16.6	1.23
244. <u>MARLBORO</u>	KFM	15.1	1.00	284. Raleigh Extra	KF	16.7	1.06
245. <u>ALPINE</u>	100M	15.1	1.06	285. Pall Mall (Red)	100	16.7	1.31
246. Sterling	100	15.1	1.09	286. Newport	KFM	16.8	1.24
247. Century 25's	100	15.1	1.15	287. More	120M	16.9	1.43
248. Doral Full Flavor	100M	15.1	1.18	288. Winston	100	17.0	1.20
249. Raleigh	100	15.2	0.98	289. More	120	17.0	1.35
250. Century 25's	KF	15.2	1.12	290. Richland 25's	KF	17.1	1.25
251. Montclair	KF	15.2	1.17	291. American Full Flavor	KF	17.1	1.30
252. Old Gold	KF	15.2	1.19	292. Richland 25's	100	17.2	1.27
253. Max	120M	15.2	1.27	293. Newport 25's	100M	17.2	1.30
254. Max	120	15.3	1.25	294. Viceroy	100	17.4	1.34
255. <u>BRISTOL FULL FLAVOR</u>	KF	15.4	1.01	295. Winston	KF	17.4	1.50
256. <u>MARLBORO 25'S</u>	KF	15.4	1.10	296. Newport 25's	KFM	17.6	1.40
257. Kool (Box)	KFM	15.5	1.09	297. Tall	120	17.8	1.51
258. Pall Mall	KF	15.5	1.19	298. Winston (Box)	KF	18.0	1.32
259. Malibu	100	15.5	1.20	299. Old Gold	100	18.0	1.39
260. Sterling	100M	15.6	1.12	300. Newport (Box)	100M	18.1	1.41
261. <u>MARLBORO</u>	100	15.6	1.17	301. Camel (Box)	KF	18.2	1.33
262. Viceroy (Box)	KF	15.7	1.11	302. Winston Select	KF	18.2	1.43
263. <u>BENSON &amp; HEDGES</u>	100M	15.7	1.12	303. Spring	100M	18.3	1.38
264. Newport (Box)	LFM	15.7	1.14	304. Newport	100M	18.3	1.39
265. Raleigh Extra	100	15.8	1.04	305. Winston Select (Box)	KF	18.7	1.48
266. <u>MARLBORO (BOX)</u>	LF	15.8	1.10	306. Pyramid	KNF	19.8	1.44
267. <u>BRISTOL FULL FLAVOR</u>	100	15.8	1.10	307. Kool	RNFM	19.9	1.28
268. <u>MARLBORO</u>	KF	15.8	1.12	308. <u>COMMANDER</u>	RNF	19.9	1.34
269. <u>BENSON &amp; HEDGES (BOX)</u>	100	15.8	1.16	309. Chesterfield King	KNF	20.3	1.40
270. Pyramid Full Flavor	100	15.8	1.35	310. Camel	RNF	20.9	1.51
271. <u>BENSON &amp; HEDGES (BOX)</u>	100M	15.9	1.12	311. Raleigh	KNF	21.8	1.31
272. Montclair	100	15.9	1.18	312. <u>PLAYERS NAVY CUT (BOX)</u>	RNF	22.5	1.64
273. Salem	KFM	16.0	1.22	313. <u>ENGLISH OVALS (BOX)</u>	KNF	22.6	1.85
274. Tall	120M	16.0	1.43	314. Herbert Tareyton	KNF	23.3	1.60
275. <u>CAMBRIDGE FULL FLAVOR</u>	KF	16.1	1.10	315. Old Gold Straights	KNF	23.5	1.75
276. Pyramid Full Flavor	100M	16.1	1.37	316. Pall Mall	KNF	24.0	1.71
277. Kool	KFM	16.2	1.11	317. <u>COMMANDER</u>	KNF	24.2	1.70
278. <u>CAMBRIDGE FULL FLAVOR</u>	100	16.2	1.16	318. Raleigh Extra	KNF	24.3	1.56
279. <u>BENSON &amp; HEDGES</u>	100	16.2	1.18	319. Lucky Strike	RNF	25.0	1.74
280. Kool	100M	16.3	1.24	320. <u>BRISTOL</u>	KNF	25.1	1.72

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PHILIP MORRIS U.S.A.  
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ULTRA LOW TAR KING SIZE FILTER CIGARETTES

(6 MG TAR OR LESS)

(Brands Ranked by FTC Tar, left to right)

	<u>Now</u>	<u>Carlton</u>	<u>Barclay*</u>
<sup>1</sup> Sales	0.31	0.68	0.16
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	1.2	1.3	3.4
Nicotine, mg/cigt.	0.15	0.15	0.32
Puffs/cigt.	6.9	7.4	9.4
Filtration Eff., %	74	71	64
CO, mg/cigt.	1.8	2.0	1.5
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	106	113	44
Static Burn. Time, min.	5.8	6.2	8.1
Length, mm	83.9	83.1	83.9
Circumference, mm	24.9	25.0	24.8
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.6	0.5
Permeability, ml/cm <sup>2</sup> x min.	40	51	23
<b><u>Filter</u></b>			
Type	CA	CA	CA
Inner	-	-	-
Outer	-	-	-
RTD, mm of H <sub>2</sub> O	151	157	106
Length, mm	26.8	24.8	27.0
Weight, g	0.19	0.19	0.20
Tipping Paper			
Length, mm	31.0	30.0	32.0
Tipping Paper Color	White	White	Cork
Ventilation, %	74	76	83
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.97	2.25	1.93
Total red. sugars, % (DWB)	3.4	4.7	6.0
Reconstituted Tob., %	15	20	15
Expanded Stems, %	None	None	7
Expanded Tob., %	51	46	11
Wt. of Tob., g (12.5% OV)	0.494	0.536	0.659
Rod Length, mm	57.1	58.2	56.9
Rod Density, g/cc	0.176	0.185	0.236

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

\*These products were smoked using the new Coresta holder designed for channel ventilated cigarettes.

2050250408

ULTRA LOW TAR KING SIZE FILTER CIGARETTES

(6 MG TAR OR LESS)

(Brands Ranked by FTC Tar, left to right)

<u>True</u>	<u>Merit Ultra Lights (Box)</u>	<u>Vantage Ultra Lights</u>
0.56	0.43	0.65
4.3	4.7	5.4
0.43	0.44	0.51
8.3	8.0	8.2
57	62	63
4.4	5.2	7.8
67	112	107
6.9	7.9	7.3
84.5	83.1	83.9
24.9	24.9	24.8
Cit.	Cit.	Cit.
0.7	0.6	0.5
34	34	25
-	CA	CA
CA	-	-
PL	-	-
97	130	126
24.8	26.8	26.9
0.17	0.18	0.19
30.0	32.0	31.0
White	Cork	White
61	55	52
2.15	2.06	2.09
4.9	5.2	6.2
20	22	25
None	None	None
14	21	15
0.660	0.599	0.612
59.7	56.3	57.0
0.224	0.215	0.219

<sup>1</sup>**Sales****Smoke**

FTC Tar, mg/cigt.  
 Nicotine, mg/cigt.  
 Puffs/cigt.  
 Filtration Eff., %  
 CO, mg/cigt.

**Cigarette**

Total RTD, mm of H<sub>2</sub>O  
 Static Burn. Time, min.  
 Length, mm  
 Circumference, mm

**Paper**

Component Type  
 Component Percent  
 Permeability, ml/cm<sup>2</sup> x min.

**Filter**

Type  
 Inner  
 Outer  
 RTD, mm of H<sub>2</sub>O  
 Length, mm  
 Weight, g  
 Tipping Paper  
 Length, mm  
 Tipping Paper Color  
 Ventilation, %

**Filler**

Total alkaloids, % (DWB)  
 Total red. sugars, % (DWB)  
 Reconstituted Tob., %  
 Expanded Stems, %  
 Expanded Tob., %  
 Wt. of Tob., g (12.5% OV)  
 Rod Length, mm  
 Rod Density, g/cc

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2050250409

ULTRA LOW TAR KING SIZE FILTER CIGARETTES

(6 MG TAR OR LESS)

(Brands Ranked by FTC Tar, left to right)

	<u>Camel Ultra Lights</u>	<u>Camel Ultra Lights (Box)</u>	<u>Winston Ultra Lights</u>
<sup>1</sup> Sales	0.14	0.10	0.56
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	5.7	5.9	6.3
Nicotine, mg/cigt.	0.57	0.56	0.60
Puffs/cigt.	9.1	8.4	8.1
Filtration Eff., %	62	60	61
CO, mg/cigt.	7.4	7.9	7.4
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	114	118	115
Static Burn. Time, min.	8.1	7.8	7.5
Length, mm	83.9	83.0	83.9
Circumference, mm	24.8	24.5	24.9
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.5	0.5
Permeability, ml/cm <sup>2</sup> x min.	27	29	24
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	124	130	123
Length, mm	26.8	26.8	26.8
Weight, g	0.19	0.17	0.19
Tipping Paper			
Length, mm	31.0	31.0	31.0
Tipping Paper Color	Cork	Cork	Cork
Ventilation, %	50	48	45
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	2.12	2.13	2.12
Total red. sugars, % (DWB)	5.1	5.4	6.4
Reconstituted Tob., %	25	25	25
Expanded Stems, %	None	None	None
Expanded Tob., %	15	15	15
Wt. of Tob., g (12.5% OV)	0.647	0.613	0.626
Rod Length, mm	57.1	56.2	57.1
Rod Density, g/cc	0.230	0.228	0.222

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

LOW TAR KING SIZE FILTER CIGARETTES

(15 MG TAR OR LESS)

(Brands Ranked by FTC Tar, left to right)

	<u>Merit</u>	<u>Vantage</u>	<u>Parliament Lights</u>
<sup>1</sup> Sales	1.38	1.59	0.33
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	8.1	8.7	9.5
Nicotine, mg/cigt.	0.64	0.68	0.71
Puffs/cigt.	7.9	8.6	8.2
Filtration Eff., %	61	60	54
CO, mg/cigt.	8.4	8.6	9.5
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	120	111	118
Static Burn. Time, min.	7.6	7.6	7.5
Length, mm	84.2	84.1	83.7
Circumference, mm	25.0	25.0	24.9
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	1.5	0.4	2.2
Permeability, ml/cm <sup>2</sup> x min.	46	24	44
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	112	108	118
Length, mm	26.9	25.1	25.0
Weight, g	0.17	0.29	0.13
Tipping Paper			
Length, mm	32.0	30.0	30.0
Tipping Paper Color	Cork	Cork	White
Ventilation, %	32	43	35
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.92	1.87	1.98
Total red. sugars, % (DWB)	5.9	6.9	5.9
Reconstituted Tob., %	22	25	22
Expanded Stems, %	3	None	3
Expanded Tob., %	12	12	12
Wt. of Tob., g (12.5% OV)	0.671	0.668	0.689
Rod Length, mm	57.3	59.1	58.7
Rod Density, g/cc	0.236	0.228	0.238

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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2050250411



**LOW TAR KING SIZE FILTER CIGARETTES**(15 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)

	<u>Winston Lights (Box)</u>	<u>Winston Lights</u>	<u>Camel Lights (Box)</u>
<sup>1</sup> <b>Sales</b>	0.40	3.43	1.09
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	9.8	10.0	10.3
Nicotine, mg/cigt.	0.73	0.75	0.74
Puffs/cigt.	8.6	7.5	7.9
Filtration Eff., %	58	55	58
CO, mg/cigt.	10.9	9.9	12.6
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	136	119	141
Static Burn. Time, min.	9.1	7.9	8.2
Length, mm	82.9	83.7	83.3
Circumference, mm	24.6	24.9	24.5
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.5	0.5
Permeability, ml/cm <sup>2</sup> x min.	25	39	25
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	108	97	115
Length, mm	26.9	26.8	26.8
Weight, g	0.17	0.17	0.17
Tipping Paper			
Length, mm	31.0	31.0	31.0
Tipping Paper Color	Cork	Cork	Cork
Ventilation, %	15	19	18
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.75	1.77	1.76
Total red. sugars, % (DWB)	7.4	7.7	7.1
Reconstituted Tob., %	25	25	25
Expanded Stems, %	None	None	None
Expanded Tob., %	7	12	12
Wt. of Tob., g (12.5% OV)	0.707	0.635	0.627
Rod Length, mm	56.0	56.9	56.5
Rod Density, g/cc	0.262	0.226	0.232

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

2050250412

# LOW TAR KING SIZE FILTER CIGARETTES

(15 MG TAR OR LESS)

(Brands Ranked by FTC Tar, left to right)

<u>Camel Lights</u>	<u>Marlboro Lights</u>	<u>Marlboro Lights (Box)</u>	
2.02	8.70	10.17	<sup>1</sup> Sales
			<b><u>Smoke</u></b>
10.6	10.8	11.0	FTC Tar, mg/cigt.
0.81	0.81	0.81	Nicotine, mg/cigt.
8.0	8.4	8.3	Puffs/cigt.
53	54	54	Filtration Eff., %
10.9	10.6	11.3	CO, mg/cigt.
			<b><u>Cigarette</u></b>
119	119	122	Total RTD, mm of H <sub>2</sub> O
8.0	8.2	8.2	Static Burn. Time, min.
84.0	84.0	83.1	Length, mm
24.9	25.0	24.9	Circumference, mm
			<b><u>Paper</u></b>
Cit.	Cit.	Cit.	Component Type
0.5	0.6	0.5	Component Percent
38	35	37	Permeability, ml/cm <sup>2</sup> x min.
			<b><u>Filter</u></b>
CA	CA	CA	Type
97	96	99	RTD, mm of H <sub>2</sub> O
27.0	26.8	26.9	Length, mm
0.17	0.17	0.17	Weight, g
			Tipping Paper
31.0	31.0	31.0	Length, mm
Cork	White	White	Tipping Paper Color
18	23	23	Ventilation, %
			<b><u>Filler</u></b>
1.81	1.93	1.92	Total alkaloids, % (DWB)
7.1	6.4	7.2	Total red. sugars, % (DWB)
25	22	22	Reconstituted Tob., %
None	3	3	Expanded Stems, %
12	12	12	Expanded Tob., %
0.664	0.677	0.657	Wt. of Tob., g (12.5% OV)
56.9	57.3	56.2	Rod Length, mm
0.236	0.238	0.237	Rod Density, g/cc

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2050250413

LOW TAR KING SIZE FILTER CIGARETTES

(15 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)

	<u>Marlboro Medium</u>	<u>Marlboro Medium (Box)</u>	<u>L &amp; M</u>
<sup>1</sup> Sales	0.69	1.37	0.34
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	12.0	12.2	12.5
Nicotine, mg/cigt.	0.88	0.88	1.02
Puffs/cigt.	8.4	8.2	7.6
Filtration Eff., %	52	51	45
CO, mg/cigt.	11.6	11.9	12.0
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	114	112	116
Static Burn. Time, min.	8.1	8.1	7.7
Length, mm	84.0	83.0	84.1
Circumference, mm	24.9	25.0	24.7
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.4	0.5
Permeability, ml/cm <sup>2</sup> x min.	36	32	175*
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	86	84	62
Length, mm	26.8	27.1	24.6
Weight, g	0.15	0.15	0.14
Tipping Paper			
Length, mm	31.0	31.0	30.0
Tipping Paper Color	Cork	Cork	White
Ventilation, %	21	20	None
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.90	1.95	2.05
Total red. sugars, % (DWB)	6.1	6.3	6.9
Reconstituted Tob., %	22	22	15
Expanded Stems, %	3	3	5
Expanded Tob., %	12	12	23
Wt. of Tob., g (12.5% OV)	0.680	0.656	0.624
Rod Length, mm	57.2	55.9	59.4
Rod Density, g/cc	0.241	0.237	0.216

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

\*These cigarette papers are perforated.

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2050250414

# LOW TAR KING SIZE FILTER CIGARETTES

(15 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)

KentCamel

0.81

1.84

12.6

14.6

0.91

1.07

8.2

8.5

50

44

12.0

12.3

126

99

7.2

7.3

84.1

84.1

24.9

24.9

Cit.

Cit.

0.8

0.9

35

37

CA

CA

81

64

20.9

20.9

0.13

0.13

25.0

25.0

White

Cork

20

13

1.88

1.81

6.8

7.2

22

25

None

None

12

12

0.735

0.723

63.2

63.2

0.235

0.232

<sup>1</sup>SalesSmoke

FTC Tar, mg/cigt.

Nicotine, mg/cigt.

Puffs/cigt.

Filtration Eff., %

CO, mg/cigt.

CigaretteTotal RTD, mm of H<sub>2</sub>O

Static Burn. Time, min.

Length, mm

Circumference, mm

Paper

Component Type

Component Percent

Permeability, ml/cm<sup>2</sup> x min.Filter

Type

RTD, mm of H<sub>2</sub>O

Length, mm

Weight, g

Tipping Paper

Length, mm

Tipping Paper Color

Ventilation, %

Filler

Total alkaloids, % (DWB)

Total red. sugars, % (DWB)

Reconstituted Tob., %

Expanded Stems, %

Expanded Tob., %

Wt. of Tob., g (12.5% OV)

Rod Length, mm

Rod Density, g/cc

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2050250415

FULL FLAVOR KING SIZE FILTER CIGARETTES

(16 MG TAR OR MORE)  
(Brands Ranked by FTC Tar, left to right)

	<u>Marlboro</u>	<u>Winston</u>	<u>Winston (Box)</u>
<sup>1</sup> Sales	9.79	6.55	0.93
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	15.8	17.4	18.0
Nicotine, mg/cigt.	1.12	1.50	1.32
Puffs/cigt.	9.2	9.7	9.6
Filtration Eff., %	44	45	44
CO, mg/cigt.	13.1	13.8	16.8
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	112	100	120
Static Burn. Time, min.	7.9	8.6	9.1
Length, mm	84.0	83.9	83.0
Circumference, mm	24.9	24.9	24.5
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.5	0.5
Permeability, ml/cm <sup>2</sup> x min.	41	23	25
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	72	67	68
Length, mm	20.8	20.8	21.0
Weight, g	0.12	0.13	0.14
Tipping Paper			
Length, mm	25.0	25.0	25.0
Tipping Paper Color	Cork	Cork	Cork
Ventilation, %	13	14	9
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.93	2.23	1.82
Total red. sugars, % (DWB)	6.3	6.8	6.8
Reconstituted Tob., %	22	25	25
Expanded Stems, %	3	None	None
Expanded Tob., %	12	7	12
Wt. of Tob., g (12.5% OV)	0.749	0.757	0.756
Rod Length, mm	63.2	63.1	62.0
Rod Density, g/cc	0.240	0.243	0.255

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

**FULL FLAVOR KING SIZE FILTER CIGARETTES**

(16 MG TAR OR MORE)  
(Brands Ranked by FTC Tar, left to right)

<u>Camel (Box)</u>	<u>Winston Select</u>	<u>Winston Select (Box)</u>	
0.92	0.63	0.59	<sup>1</sup> Sales
			<b><u>Smoke</u></b>
18.2	18.2	18.7	FTC Tar, mg/cigt.
1.33	1.43	1.48	Nicotine, mg/cigt.
9.7	9.3	8.8	Puffs/cigt.
42	46	43	Filtration Eff., %
17.6	17.9	18.4	CO, mg/cigt.
			<b><u>Cigarette</u></b>
118	117	109	Total RTD, mm of H <sub>2</sub> O
8.9	8.7	8.7	Static Burn. Time, min.
83.1	84.0	83.1	Length, mm
24.5	24.9	24.6	Circumference, mm
			<b><u>Paper</u></b>
Cit.	Cit.	Cit.	Component Type
0.5	0.5	0.5	Component Percent
25	26	27	Permeability, ml/cm <sup>2</sup> x min.
			<b><u>Filter</u></b>
CA	CA	CA	Type
67	76	69	RTD, mm of H <sub>2</sub> O
21.0	21.0	21.4	Length, mm
0.13	0.13	0.13	Weight, g
			Tipping Paper
25.0	25.0	25.0	Length, mm
Cork	Cork	Cork	Tipping Paper Color
9	6	6	Ventilation, %
			<b><u>Filler</u></b>
1.89	2.08	2.13	Total alkaloids, % (DWB)
6.4	6.1	6.2	Total red. sugars, % (DWB)
25	25	25	Reconstituted Tob., %
None	None	None	Expanded Stems, %
12	7	7	Expanded Tob., %
0.759	0.748	0.716	Wt. of Tob., g (12.5% OV)
62.1	63.1	61.7	Rod Length, mm
0.257	0.241	0.242	Rod Density, g/cc

MENTHOL

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2050250417

ULTRA LOW TAR KING SIZE FILTER MENTHOL CIGARETTES

(6 MG TAR OR LESS)

(Brands Ranked by FTC Tar, left to right)

	<u>Now</u>	<u>Carlton</u>	<u>Salem Ultra Lights</u>
<sup>1</sup> Sales	0.12	0.20	0.77
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	0.9	1.3	4.9
Nicotine, mg/cigt.	0.13	0.17	0.45
Puffs/cigt.	7.0	7.4	7.4
Filtration Eff., %	74	75	61
CO, mg/cigt.	1.5	1.9	5.9
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	105	114	115
Static Burn. Time, min.	5.8	6.1	6.9
Length, mm	83.9	83.1	84.1
Circumference, mm	24.9	24.9	24.9
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.8	1.5
Permeability, ml/cm <sup>2</sup> x min.	38	53	25
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	152	152	125
Length, mm	26.9	24.8	26.8
Weight, g	0.20	0.19	0.19
Tipping Paper			
Length, mm	31.0	30.0	31.0
Tipping Paper Color	White	White	White
Ventilation, %	77	73	50
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	2.06	2.21	2.02
Total red. sugars, % (DWB)	3.6	4.9	5.2
Reconstituted Tob., %	15	20	25
Expanded Stems, %	None	None	None
Expanded Tob., %	51	46	25
Wt. of Tob., g (12.5% OV)	0.507	0.536	0.602
Rod Length, mm	57.0	58.3	57.3
Rod Density, g/cc	0.181	0.187	0.213
<b><u>Menthol, mg/cigt.</u></b>			
Smoke	0.16	0.23	0.30
Filler	3.4	4.8	2.4
Filter	5.0	2.9	1.9

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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# LOW TAR KING SIZE FILTER MENTHOL CIGARETTES

(15 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)

	<u>Merit</u>	<u>Vantage</u>	<u>Newport Lights</u>
<sup>1</sup> Sales	0.23	0.29	0.45
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	8.0	8.6	9.4
Nicotine, mg/cigt.	0.64	0.66	0.75
Puffs/cigt.	8.1	8.4	6.8
Filtration Eff., %	58	60	57
CO, mg/cigt.	9.2	8.8	10.0
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	124	120	134
Static Burn. Time, min.	7.9	7.7	6.9
Length, mm	83.9	84.1	84.0
Circumference, mm	25.0	24.8	24.9
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	1.8	0.9	1.9
Permeability, ml/cm <sup>2</sup> x min.	48	37	29
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	116	109	105
Length, mm	26.8	25.1	24.9
Weight, g	0.18	0.29	0.15
Tipping Paper			
Length, mm	32.0	30.0	32.0
Tipping Paper Color	Cork	Cork	Cork
Ventilation, %	33	39	23
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.91	1.80	2.22
Total red. sugars, % (DWB)	6.1	6.9	7.1
Reconstituted Tob., %	22	25	22
Expanded Stems, %	3	None	None
Expanded Tob., %	12	12	12
Wt. of Tob., g (12.5% OV)	0.663	0.690	0.672
Rod Length, mm	57.0	59.0	59.1
Rod Density, g/cc	0.234	0.238	0.230
<b><u>Menthol, mg/cigt.</u></b>			
Smoke	0.51	0.29	0.26
Filler	2.8	2.1	1.7
Filter	2.0	2.0	1.4

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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2050250419



LOW TAR KING SIZE FILTER MENTHOL CIGARETTES

(15 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)

	<u>Marlboro Lights (Box)</u>	<u>Salem Lights</u>	<u>Belair</u>
<sup>1</sup> Sales	0.33	2.93	0.23
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	10.2	10.3	10.5
Nicotine, mg/cigt.	0.75	0.74	0.81
Puffs/cigt.	7.8	7.8	6.7
Filtration Eff., %	52	56	49
CO, mg/cigt.	9.2	11.6	9.1
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	107	126	104
Static Burn. Time, min.	7.8	7.7	6.9
Length, mm	83.3	84.0	83.8
Circumference, mm	25.0	25.0	24.8
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.9	0.2
Permeability, ml/cm <sup>2</sup> x min.	45	39	40
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	89	105	74
Length, mm	26.9	27.0	27.0
Weight, g	0.17	0.17	0.15
Tipping Paper			
Length, mm	31.0	31.0	32.0
Tipping Paper Color	White	White	White
Ventilation, %	25	23	20
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	2.02	1.82	2.08
Total red. sugars, % (DWB)	7.3	6.3	5.6
Reconstituted Tob., %	22	25	13
Expanded Stems, %	None	None	10
Expanded Tob., %	15	12	11
Wt. of Tob., g (12.5% OV)	0.637	0.661	0.629
Rod Length, mm	56.4	57.0	56.8
Rod Density, g/cc	0.227	0.233	0.226
<b><u>Menthol, mg/cigt.</u></b>			
Smoke	0.43	0.43	0.26
Filler	2.1	2.2	1.3
Filter	1.7	1.9	1.0

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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2050250420

LOW TAR KING SIZE FILTER MENTHOL CIGARETTES

(15 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)

Kool MildsMarlboro

1.03

0.47

11.8

15.1

0.92

1.00

7.3

7.6

49

42

11.4

14.3

114

119

7.6

7.1

84.1

84.1

24.8

24.9

Cit.

Cit.

0.4

2.3

22

45

CA

CA

75

65

27.0

20.9

0.15

0.13

32.0

25.0

Cork

Cork

18

None

2.08

2.05

5.4

7.5

13

22

10

None

11

15

0.673

0.707

57.2

63.2

0.240

0.227

0.44

0.55

2.1

2.1

1.3

1.1

<sup>1</sup>SalesSmoke

FTC Tar, mg/cigt.

Nicotine, mg/cigt.

Puffs/cigt.

Filtration Eff., %

CO, mg/cigt.

CigaretteTotal RTD, mm of H<sub>2</sub>O

Static Burn. Time, min.

Length, mm

Circumference, mm

Paper

Component Type

Component Percent

Permeability, ml/cm<sup>2</sup> x min.Filter

Type

RTD, mm of H<sub>2</sub>O

Length, mm

Weight, g

Tipping Paper

Length, mm

Tipping Paper Color

Ventilation, %

Filler

Total alkaloids, % (DWB)

Total red. sugars, % (DWB)

Reconstituted Tob., %

Expanded Stems, %

Expanded Tob., %

Wt. of Tob., g (12.5% OV)

Rod Length, mm

Rod Density, g/cc

Menthol, mg/cigt.

Smoke

Filler

Filter

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2050250421

FULL FLAVOR KING SIZE FILTER MENTHOL CIGARETTES

(16 MG TAR OR MORE)  
(Brands Ranked by FTC Tar, left to right)

	<u>Kool (Box)</u>	<u>Salem</u>
<sup>1</sup> Sales	0.68	3.06
<b><u>Smoke</u></b>		
FTC Tar, mg/cigt.	15.5	16.0
Nicotine, mg/cigt.	1.09	1.22
Puffs/cigt.	7.0	8.1
Filtration Eff., %	43	45
CO, mg/cigt.	14.1	15.5
<b><u>Cigarette</u></b>		
Total RTD, mm of H <sub>2</sub> O	116	113
Static Burn. Time, min.	6.8	7.7
Length, mm	84.0	83.9
Circumference, mm	24.8	24.9
<b><u>Paper</u></b>		
Component Type	Cit.	Cit.
Component Percent	0.8	0.5
Permeability, ml/cm <sup>2</sup> x min.	30	23
<b><u>Filter</u></b>		
Type	CA	CA
RTD, mm of H <sub>2</sub> O	61	65
Length, mm	20.8	20.8
Weight, g	0.12	0.13
Tipping Paper		
Length, mm	26.0	25.0
Tipping Paper Color	Cork	White
Ventilation, %	None	None
<b><u>Filler</u></b>		
Total alkaloids, % (DWB)	2.17	2.17
Total red. sugars, % (DWB)	5.9	6.3
Reconstituted Tob., %	13	25
Expanded Stems, %	10	None
Expanded Tob., %	11	12
Wt. of Tob., g (12.5% OV)	0.697	0.720
Rod Length, mm	63.2	63.1
Rod Density, g/cc	0.225	0.231
<b><u>Menthol, mg/cigt.</u></b>		
Smoke	0.45	0.57
Filler	1.8	2.1
Filter	1.0	1.1

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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FULL FLAVOR KING SIZE FILTER MENTHOL CIGARETTES

(16 MG TAR OR MORE)  
(Brands Ranked by FTC Tar, left to right)

<u>Kool</u>	<u>Newport</u>	
3.97	4.05	<sup>1</sup> Sales
		<b><u>Smoke</u></b>
16.2	16.8	FTC Tar, mg/cigt.
1.11	1.24	Nicotine, mg/cigt.
7.2	8.0	Puffs/cigt.
39	44	Filtration Eff., %
15.4	16.6	CO, mg/cigt.
		<b><u>Cigarette</u></b>
112	125	Total RTD, mm of H <sub>2</sub> O
6.8	7.5	Static Burn. Time, min.
83.8	84.2	Length, mm
24.9	24.9	Circumference, mm
		<b><u>Paper</u></b>
Cit.	Cit.	Component Type
0.7	0.7	Component Percent
28	18	Permeability, ml/cm <sup>2</sup> x min.
		<b><u>Filter</u></b>
CA	CA	Type
55	61	RTD, mm of H <sub>2</sub> O
20.8	21.0	Length, mm
0.12	0.12	Weight, g
		Tipping Paper
26.0	25.0	Length, mm
Cork	Cork	Tipping Paper Color
None	None	Ventilation, %
		<b><u>Filler</u></b>
2.18	2.21	Total alkaloids, % (DWB)
5.1	7.1	Total red. sugars, % (DWB)
13	22	Reconstituted Tob., %
10	None	Expanded Stems, %
11	12	Expanded Tob., %
0.715	0.722	Wt. of Tob., g (12.5% OV)
63.0	63.2	Rod Length, mm
0.229	0.232	Rod Density, g/cc
		<b><u>Menthol, mg/cigt.</u></b>
0.48	0.41	Smoke
1.9	1.6	Filler
1.0	0.9	Filter

100 & 120  
PLAIN

2050250423

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ULTRA LOW TAR 100 MM FILTER CIGARETTES

(6 MG TAR OR LESS)

(Brands Ranked by FTC Tar, left to right)

	<u>Carlton (Box)</u>	<u>Carlton</u>	<u>Now</u>
<sup>1</sup> Sales	0.61	0.92	0.86
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	1.3	2.2	2.3
Nicotine, mg/cigt.	0.15	0.24	0.24
Puffs/cigt.	9.0	8.5	8.2
Filtration Eff., %	68	66	66
CO, mg/cigt.	1.4	2.8	3.0
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	78	94	97
Static Burn. Time, min.	5.9	5.9	5.7
Length, mm	99.0	99.9	99.0
Circumference, mm	24.5	24.5	24.8
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	1.8	1.8	1.5
Permeability, ml/cm <sup>2</sup> x min.	22	23	27
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	128	130	132
Length, mm	31.0	30.6	30.7
Weight, g	0.19	0.16	0.19
Tipping Paper			
Length, mm	35.0	35.0	35.0
Tipping Paper Color	White	White	White
Ventilation, %	82	72	70
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	2.24	2.23	1.92
Total red. sugars, % (DWB)	5.0	5.2	3.8
Reconstituted Tob., %	20	20	15
Expanded Stems, %	None	None	None
Expanded Tob., %	46	46	51
Wt. of Tob., g (12.5% OV)	0.594	0.593	0.596
Rod Length, mm	68.1	69.3	68.3
Rod Density, g/cc	0.183	0.179	0.178

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

ULTRA LOW TAR 100 MM FILTER CIGARETTES

(6 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)

<u>Winston Ultra Lights</u>	<u>Vantage Ultra Lights</u>	<u>B &amp; H DeLuxe Ultra Lights (Box)</u>
0.63	0.67	1.29
4.6	4.8	5.5
0.47	0.48	0.47
9.6	10.2	9.5
67	67	61
6.3	7.0	5.4
112	124	113
6.8	7.8	6.7
98.8	98.7	98.2
24.8	24.8	24.1
Cit.	Cit.	Cit.
0.5	0.5	1.8
37	24	46
CA	CA	CA
144	155	135
30.7	30.8	31.3
0.22	0.22	0.18
35.0	35.0	36.0
Cork	White	White
57	56	54
2.02	2.09	1.90
6.7	6.7	6.4
25	25	22
None	None	3
15	15	19
0.722	0.755	0.708
68.1	67.9	66.9
0.216	0.227	0.228

**<sup>1</sup>Sales****Smoke**

FTC Tar, mg/cigt.  
Nicotine, mg/cigt.  
Puffs/cigt.  
Filtration Eff., %  
CO, mg/cigt.

**Cigarette**

Total RTD, mm of H<sub>2</sub>O  
Static Burn. Time, min.  
Length, mm  
Circumference, mm

**Paper**

Component Type  
Component Percent  
Permeability, ml/cm<sup>2</sup> x min.

**Filter**

Type  
RTD, mm of H<sub>2</sub>O  
Length, mm  
Weight, g  
Tipping Paper  
Length, mm  
Tipping Paper Color  
Ventilation, %

**Filler**

Total alkaloids, % (DWB)  
Total red. sugars, % (DWB)  
Reconstituted Tob., %  
Expanded Stems, %  
Expanded Tob., %  
Wt. of Tob., g (12.5% OV)  
Rod Length, mm  
Rod Density, g/cc

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ULTRA LOW TAR 100 MM FILTER CIGARETTES

(6 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)

	<u>Merit Ultra Lights (Box)</u>	<u>Camel Ultra Lights</u>
<sup>1</sup> Sales	0.50	0.09
<b><u>Smoke</u></b>		
FTC Tar, mg/cigt.	6.0	6.4
Nicotine, mg/cigt.	0.52	0.61
Puffs/cigt.	8.9	9.2
Filtration Eff., %	60	59
CO, mg/cigt.	6.2	8.4
<b><u>Cigarette</u></b>		
Total RTD, mm of H <sub>2</sub> O	110	106
Static Burn. Time, min.	6.4	6.8
Length, mm	98.3	98.2
Circumference, mm	24.1	24.5
<b><u>Paper</u></b>		
Component Type	Cit.	Cit.
Component Percent	1.9	1.5
Permeability, ml/cm <sup>2</sup> x min.	44	26
<b><u>Filter</u></b>		
Type	CA	CA
RTD, mm of H <sub>2</sub> O	125	120
Length, mm	31.2	30.9
Weight, g	0.18	0.19
Tipping Paper		
Length, mm	36.0	35.0
Tipping Paper Color	Cork	Cork
Ventilation, %	53	49
<b><u>Filler</u></b>		
Total alkaloids, % (DWB)	2.03	2.04
Total red. sugars, % (DWB)	5.4	5.7
Reconstituted Tob., %	22	25
Expanded Stems, %	None	None
Expanded Tob., %	21	15
Wt. of Tob., g (12.5% OV)	0.679	0.681
Rod Length, mm	67.1	67.3
Rod Density, g/cc	0.219	0.212

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

# LOW TAR 100 MM FILTER CIGARETTES

(15 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)

	<u>Vantage</u>	<u>Winston Lights (Box)</u>	<u>Merit</u>
<sup>1</sup> Sales	0.78	0.16	1.12
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	8.7	9.1	10.1
Nicotine, mg/cigt.	0.69	0.75	0.80
Puffs/cigt.	10.9	10.2	10.2
Filtration Eff., %	59	57	58
CO, mg/cigt.	9.3	9.2	9.3
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	114	117	114
Static Burn. Time, min.	7.4	8.0	7.7
Length, mm	99.3	98.0	99.4
Circumference, mm	24.8	24.2	24.9
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.5	0.5
Permeability, ml/cm <sup>2</sup> x min.	24	39	37
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	115	115	107
Length, mm	27.5	30.8	31.3
Weight, g	0.30	0.19	0.19
Tipping Paper			
Length, mm	34.0	35.0	36.0
Tipping Paper Color	Cork	Cork	Cork
Ventilation, %	51	39	36
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.81	1.77	1.98
Total red. sugars, % (DWB)	7.1	7.4	6.2
Reconstituted Tob., %	25	25	22
Expanded Stems, %	None	None	3
Expanded Tob., %	12	7	12
Wt. of Tob., g (12.5% OV)	0.832	0.769	0.799
Rod Length, mm	71.8	67.2	68.1
Rod Density, g/cc	0.236	0.247	0.237

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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2050250427



LOW TAR 100 MM FILTER CIGARETTES

(15 MG TAR OR LESS)

(Brands Ranked by FTC Tar, left to right)

	<u>Camel Lights</u>	<u>Winston Lights</u>	<u>B &amp; H Lights</u>
<sup>1</sup> Sales	0.48	2.16	0.87
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	10.2	10.5	11.1
Nicotine, mg/cigt.	0.76	0.79	0.83
Puffs/cigt.	9.8	10.1	10.8
Filtration Eff., %	55	58	58
CO, mg/cigt.	11.3	12.5	11.1
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	119	115	119
Static Burn. Time, min.	7.5	8.0	7.9
Length, mm	98.9	99.0	99.6
Circumference, mm	24.8	24.8	24.9
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.4	0.5
Permeability, ml/cm <sup>2</sup> x min.	37	37	25
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	106	105	110
Length, mm	31.0	30.7	31.4
Weight, g	0.18	0.18	0.19
Tipping Paper			
Length, mm	35.0	35.0	36.0
Tipping Paper Color	Cork	Cork	White
Ventilation, %	29	32	34
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.65	1.72	1.88
Total red. sugars, % (DWB)	7.7	7.4	6.8
Reconstituted Tob., %	25	25	22
Expanded Stems, %	None	None	3
Expanded Tob., %	7	7	12
Wt. of Tob., g (12.5% OV)	0.801	0.802	0.799
Rod Length, mm	67.9	68.3	68.2
Rod Density, g/cc	0.241	0.239	0.238

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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LOW TAR 100 MM FILTER CIGARETTES

(15 MG TAR OR LESS)  
(Brands Ranked by FTC Tar, left to right)

<u>Marlboro Lights (Box)</u>	<u>Marlboro Lights</u>	<u>L &amp; M</u>
3.16	3.68	0.08
11.1	11.2	11.4
0.85	0.87	0.97
10.2	10.4	9.7
59	57	50
11.3	11.5	11.7
120	126	111
8.1	7.8	7.8
98.4	99.4	99.0
24.9	24.9	24.8
Cit.	Cit.	Cit.
0.5	0.5	0.4
40	26	78
CA	CA	CA
106	110	81
31.1	31.4	29.7
0.19	0.19	0.17
36.0	36.0	35.0
White	White	White
29	29	33
1.93	1.95	2.04
6.3	6.4	6.5
22	22	15
3	3	5
12	12	23
0.794	0.800	0.735
67.3	68.1	69.3
0.238	0.238	0.217

<sup>1</sup>SalesSmoke

FTC Tar, mg/cigt.  
Nicotine, mg/cigt.  
Puffs/cigt.  
Filtration Eff., %  
CO, mg/cigt.

Cigarette

Total RTD, mm of H<sub>2</sub>O  
Static Burn. Time, min.  
Length, mm  
Circumference, mm

Paper

Component Type  
Component Percent  
Permeability, ml/cm<sup>2</sup> x min.

Filter

Type  
RTD, mm of H<sub>2</sub>O  
Length, mm  
Weight, g  
Tipping Paper  
Length, mm  
Tipping Paper Color  
Ventilation, %

Filler

Total alkaloids, % (DWB)  
Total red. sugars, % (DWB)  
Reconstituted Tob., %  
Expanded Stems, %  
Expanded Tob., %  
Wt. of Tob., g (12.5% OV)  
Rod Length, mm  
Rod Density, g/cc

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2050250429

LOW TAR 100 MM FILTER CIGARETTES

(15 MG TAR OR LESS)

(Brands Ranked by FTC Tar, left to right)

	<u>Kent</u>	<u>Pall Mall (Gold)</u>
<sup>1</sup> Sales	0.58	0.62
<b><u>Smoke</u></b>		
FTC Tar, mg/cigt.	12.8	14.5
Nicotine, mg/cigt.	0.99	1.21
Puffs/cigt.	9.1	10.3
Filtration Eff., %	47	45
CO, mg/cigt.	12.4	12.6
<b><u>Cigarette</u></b>		
Total RTD, mm of H <sub>2</sub> O	117	115
Static Burn. Time, min.	7.1	7.2
Length, mm	98.9	99.3
Circumference, mm	24.9	24.4
<b><u>Paper</u></b>		
Component Type	Cit.	Cit.
Component Percent	0.8	0.9
Permeability, ml/cm <sup>2</sup> x min.	36	54
<b><u>Filter</u></b>		
Type	CA	CA
RTD, mm of H <sub>2</sub> O	66	65
Length, mm	26.9	26.7
Weight, g	0.15	0.16
Tipping Paper		
Length, mm	34.0	32.0
Tipping Paper Color	White	White
Ventilation, %	22	20
<b><u>Filler</u></b>		
Total alkaloids, % (DWB)	1.87	1.97
Total red. sugars, % (DWB)	6.9	7.8
Reconstituted Tob., %	22	22
Expanded Stems, %	None	None
Expanded Tob., %	12	15
Wt. of Tob., g (12.5% OV)	0.845	0.836
Rod Length, mm	72.0	72.6
Rod Density, g/cc	0.239	0.243

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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2050250430

**FULL FLAVOR 100 MM FILTER CIGARETTES**

(16 MG TAR OR MORE)

(Brands Ranked by FTC Tar, left to right)

	<u>Marlboro</u>	<u>B &amp; H (Box)</u>	<u>B &amp; H</u>	<u>Winston</u>
<sup>1</sup> Sales	2.97	0.25	1.24	2.30
<b><u>Smoke</u></b>				
FTC Tar, mg/cigt.	15.6	15.8	16.2	17.0
Nicotine, mg/cigt.	1.17	1.16	1.18	1.20
Puffs/cigt.	10.5	10.1	10.5	10.3
Filtration Eff., %	49	49	49	50
CO, mg/cigt.	14.6	15.0	14.0	16.3
<b><u>Cigarette</u></b>				
Total RTD, mm of H <sub>2</sub> O	118	119	115	125
Static Burn. Time, min.	7.6	8.1	8.0	8.0
Length, mm	99.5	98.7	99.5	99.3
Circumference, mm	24.9	24.8	24.9	24.9
<b><u>Paper</u></b>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.6	0.5	0.5	0.5
Permeability, ml/cm <sup>2</sup> x min.	46	42	32	23
<b><u>Filter</u></b>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	73	75	75	71
Length, mm	27.3	27.3	27.4	27.2
Weight, g	0.16	0.16	0.16	0.17
Tipping Paper				
Length, mm	31.5	32.0	32.0	32.0
Tipping Paper Color	Cork	White	White	Cork
Ventilation, %	15	13	16	8
<b><u>Filler</u></b>				
Total alkaloids, % (DWB)	1.95	1.91	1.93	1.72
Total red. sugars, % (DWB)	6.9	6.3	6.6	7.3
Reconstituted Tob., %	22	22	22	25
Expanded Stems, %	3	3	3	None
Expanded Tob., %	12	12	12	12
Wt. of Tob., g (12.5% OV)	0.860	0.838	0.831	0.838
Rod Length, mm	72.2	71.3	72.1	72.1
Rod Density, g/cc	0.242	0.240	0.233	0.237

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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2050250431

120 MM FILTER CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Carlton</u>	<u>More White Lights</u>	<u>Virginia Slims Lights (Box)</u>
<sup>1</sup> Sales	0.29	0.14	0.75
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	5.5	12.5	13.9
Nicotine, mg/cigt.	0.54	1.00	1.08
Puffs/cigt.	11.5	12.7	13.1
Filtration Eff., %	45	56	51
CO, mg/cigt.	4.2	16.5	13.7
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	88	168	133
Static Burn. Time, min.	6.2	8.6	7.5
Length, mm	119.6	119.7	119.3
Circumference, mm	22.3	21.1	23.1
<b><u>Paper</u></b>			
Component Type	Cit.	*	Cit.
Component Percent	0.8	-	0.4
Permeability, ml/cm <sup>2</sup> x min.	46	11	44
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	95	160	102
Length, mm	29.7	34.9	31.5
Weight, g	0.16	0.16	0.16
Tipping Paper			
Length, mm	35.0	36.0	36.0
Tipping Paper Color	White	White	White
Ventilation, %	67	40	29
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	2.21	1.87	1.92
Total red. sugars, % (DWB)	6.1	7.2	6.7
Reconstituted Tob., %	20	25	22
Expanded Stems, %	None	None	3
Expanded Tob., %	34	12	12
Wt. of Tob., g (12.5% OV)	0.741	0.727	0.903
Rod Length, mm	89.9	84.8	87.8
Rod Density, g/cc	0.208	0.243	0.243

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

\*None Detected.

120 MM FILTER CIGARETTES

(Brands Ranked by FTC Tar, left to right)

Saratoga (Box)More

0.24

0.67

14.6

17.0

1.11

1.35

13.6

12.8

50

49

14.0

19.5

137

150

8.0

8.5

119.5

119.6

23.1

21.1

Cit.

Cit.

0.5

1.4

27

16

CA

CA

103

117

31.5

34.9

0.16

0.16

36.0

39.0

Cork

Brown

30

32

1.93

1.91

7.2

6.7

22

25

3

None

12

12

0.918

0.715

88.0

84.8

0.246

0.238

<sup>1</sup>SalesSmoke

FTC Tar, mg/cigt.

Nicotine, mg/cigt.

Puffs/cigt.

Filtration Eff., %

CO, mg/cigt.

CigaretteTotal RTD, mm of H<sub>2</sub>O

Static Burn. Time, min.

Length, mm

Circumference, mm

Paper

Component Type

Component Percent

Permeability, ml/cm<sup>2</sup> x min.Filter

Type

RTD, mm of H<sub>2</sub>O

Length, mm

Weight, g

Tipping Paper

Length, mm

Tipping Paper Color

Ventilation, %

Filler

Total alkaloids, % (DWB)

Total red. sugars, % (DWB)

Reconstituted Tob., %

Expanded Stems, %

Expanded Tob., %

Wt. of Tob., g (12.5% OV)

Rod Length, mm

Rod Density, g/cc

100 & 120  
MENTHOL

2050250433

PHILIP MORRIS U.S.A.  
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**ULTRA LOW TAR 100 MM FILTER MENTHOL CIGARETTES**

(6 MG TAR OR LESS)

(Brands Ranked by FTC Tar, left to right)

		B & H DeLuxe Ultra Lights (Box)	Salem Ultra Lights
	Now		
<sup>1</sup> Sales	0.50	0.97	1.02
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	2.1	5.5	5.5
Nicotine, mg/cigt.	0.22	0.47	0.54
Puffs/cigt.	8.3	9.4	11.0
Filtration Eff., %	66	61	68
CO, mg/cigt.	2.6	6.3	7.7
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	92	113	111
Static Burn. Time, min.	5.4	7.1	7.7
Length, mm	99.2	98.3	99.0
Circumference, mm	24.8	24.1	24.9
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	1.5	1.8	0.5
Permeability, ml/cm <sup>2</sup> x min.	24	46	24
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	129	135	145
Length, mm	30.9	31.5	31.0
Weight, g	0.20	0.19	0.22
Tipping Paper			
Length, mm	35.0	36.0	35.0
Tipping Paper Color	White	White	White
Ventilation, %	70	54	58
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.97	1.94	1.91
Total red. sugars, % (DWB)	3.5	7.3	8.2
Reconstituted Tob., %	15	22	25
Expanded Stems, %	None	3	None
Expanded Tob., %	51	19	12
Wt. of Tob., g (12.5% OV)	0.612	0.704	0.767
Rod Length, mm	68.3	66.8	68.0
Rod Density, g/cc	0.183	0.228	0.229
<b><u>Menthol, mg/cigt.</u></b>			
Smoke	0.25	0.43	0.33
Filler	4.1	3.5	3.3
Filter	3.5	2.3	2.1

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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LOW TAR 100 MM FILTER MENTHOL CIGARETTES

(15 MG TAR OR LESS)

(Brands Ranked by FTC Tar, left to right)

	<u>Newport Lights</u>	<u>Vantage</u>
<sup>1</sup> Sales	0.11	0.09
<b><u>Smoke</u></b>		
FTC Tar, mg/cigt.	8.5	8.6
Nicotine, mg/cigt.	0.75	0.65
Puffs/cigt.	9.3	9.8
Filtration Eff., %	54	64
CO, mg/cigt.	7.9	10.2
<b><u>Cigarette</u></b>		
Total RTD, mm of H <sub>2</sub> O	108	129
Static Burn. Time, min.	6.7	7.6
Length, mm	99.0	99.1
Circumference, mm	24.8	24.9
<b><u>Paper</u></b>		
Component Type	Cit.	Cit.
Component Percent	2.0	0.5
Permeability, ml/cm <sup>2</sup> x min.	30	38
<b><u>Filter</u></b>		
Type	CA	CA
RTD, mm of H <sub>2</sub> O	94	132
Length, mm	27.0	31.0
Weight, g	0.16	0.32
Tipping Paper		
Length, mm	34.0	35.0
Tipping Paper Color	Cork	Cork
Ventilation, %	44	37
<b><u>Filler</u></b>		
Total alkaloids, % (DWB)	2.17	1.82
Total red. sugars, % (DWB)	7.3	7.3
Reconstituted Tob., %	22	25
Expanded Stems, %	None	None
Expanded Tob., %	12	12
Wt. of Tob., g (12.5% OV)	0.816	0.776
Rod Length, mm	72.0	68.1
Rod Density, g/cc	0.231	0.231
<b><u>Menthol, mg/cigt.</u></b>		
Smoke	0.29	0.32
Filler	2.3	2.5
Filter	1.4	2.2

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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2050250435



LOW TAR 100 MM FILTER MENTHOL CIGARETTES

(15 MG TAR OR LESS)

(Brands Ranked by FTC Tar, left to right)

	<u>Salem</u> <u>Lights</u>	<u>Merit</u>
<sup>1</sup> Sales	2.02	0.20
<b><u>Smoke</u></b>		
FTC Tar, mg/cigt.	9.0	10.2
Nicotine, mg/cigt.	0.74	0.76
Puffs/cigt.	11.3	10.3
Filtration Eff., %	59	58
CO, mg/cigt.	9.8	10.1
<b><u>Cigarette</u></b>		
Total RTD, mm of H <sub>2</sub> O	104	123
Static Burn. Time, min.	8.4	7.6
Length, mm	98.9	99.4
Circumference, mm	24.9	24.9
<b><u>Paper</u></b>		
Component Type	Cit.	Cit.
Component Percent	0.5	0.4
Permeability, ml/cm <sup>2</sup> x min.	24	46
<b><u>Filter</u></b>		
Type	CA	CA
RTD, mm of H <sub>2</sub> O	110	108
Length, mm	30.8	31.3
Weight, g	0.19	0.18
Tipping Paper		
Length, mm	35.0	36.0
Tipping Paper Color	White	Cork
Ventilation, %	44	35
<b><u>Filler</u></b>		
Total alkaloids, % (DWB)	1.80	1.95
Total red. sugars, % (DWB)	7.8	6.4
Reconstituted Tob., %	25	22
Expanded Stems, %	None	3
Expanded Tob., %	7	12
Wt. of Tob., g (12.5% OV)	0.832	0.798
Rod Length, mm	68.1	68.1
Rod Density, g/cc	0.248	0.238
<b><u>Menthol, mg/cigt.</u></b>		
Smoke	0.41	0.52
Filler	2.9	3.2
Filter	2.0	2.0

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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2050250436

LOW TAR 100 MM FILTER MENTHOL CIGARETTES

(15 MG TAR OR LESS)

(Brands Ranked by FTC Tar, left to right)

<u>B &amp; H Lights</u>	<u>Salem Lights (Box)</u>
-------------------------	-------------------------------

0.87	0.14
------	------

11.0	11.6
0.84	0.91
10.4	9.3
58	52
10.6	11.4

123	119
7.7	7.6
99.5	98.1
24.9	24.3

Cit.	Cit.
0.5	0.5
46	39

CA	CA
108	93
31.2	30.7
0.18	0.17
36.0	34.0
White	White
30	25

1.92	1.91
6.9	6.8
22	25
3	None
12	15
0.801	0.720
68.3	67.4
0.238	0.228

0.57	0.45
3.6	2.5
2.2	1.6

<sup>1</sup>SalesSmoke

FTC Tar, mg/cigt.  
Nicotine, mg/cigt.  
Puffs/cigt.  
Filtration Eff., %  
CO, mg/cigt.

Cigarette

Total RTD, mm of H<sub>2</sub>O  
Static Burn. Time, min.  
Length, mm  
Circumference, mm

Paper

Component Type  
Component Percent  
Permeability, ml/cm<sup>2</sup> x min.

Filter

Type  
RTD, mm of H<sub>2</sub>O  
Length, mm  
Weight, g  
Tipping Paper  
Length, mm  
Tipping Paper Color  
Ventilation, %

Filler

Total alkaloids, % (DWB)  
Total red. sugars, % (DWB)  
Reconstituted Tob., %  
Expanded Stems, %  
Expanded Tob., %  
Wt. of Tob., g (12.5% OV)  
Rod Length, mm  
Rod Density, g/cc

Menthol, mg/cigt.

Smoke  
Filler  
Filter

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2050250437

**FULL FLAVORED 100 MM FILTER MENTHOL CIGARETTES**

(16 MG TAR OR MORE)

(Brands Ranked by FTC Tar, left to right)

	<u>B &amp; H</u>	<u>B &amp; H (Box)</u>	<u>Kool</u>
<sup>1</sup> Sales	1.60	0.19	1.55
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	15.7	15.9	16.3
Nicotine, mg/cigt.	1.12	1.12	1.24
Puffs/cigt.	10.0	9.8	8.5
Filtration Eff., %	48	48	48
CO, mg/cigt.	13.8	14.4	15.8
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	117	114	126
Static Burn. Time, min.	7.3	7.6	7.0
Length, mm	99.5	98.4	99.1
Circumference, mm	24.9	24.9	24.8
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	1.7	1.8	0.5
Permeability, ml/cm <sup>2</sup> x min.	46	44	49
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	75	74	67
Length, mm	27.4	27.3	26.7
Weight, g	0.16	0.16	0.14
Tipping Paper			
Length, mm	32.0	32.0	32.0
Tipping Paper Color	White	White	Cork
Ventilation, %	13	14	None
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.95	1.92	2.22
Total red. sugars, % (DWB)	6.7	6.2	5.3
Reconstituted Tob., %	22	22	13
Expanded Stems, %	3	3	10
Expanded Tob., %	12	12	11
Wt. of Tob., g (12.5% OV)	0.844	0.841	0.804
Rod Length, mm	72.1	71.0	72.3
Rod Density, g/cc	0.238	0.240	0.227
<b><u>Menthol, mg/cigt.</u></b>			
Smoke	0.67	0.61	0.47
Filler	3.2	2.9	2.2
Filter	1.6	1.5	1.2

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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2050250438

FULL FLAVORED 100 MM FILTER MENTHOL CIGARETTES

(16 MG TAR OR MORE)  
(Brands Ranked by FTC Tar, left to right)

SalemNewport

1.93

1.73

16.6

18.3

1.23

1.39

9.8

8.8

47

45

18.0

18.3

107

128

7.9

7.4

99.2

98.9

24.9

25.0

Cit.

Cit.

0.5

0.7

24

18

CA

CA

69

61

27.3

26.8

0.15

0.17

32.0

34.0

White

Cork

17

None

1.92

2.15

5.5

7.5

25

22

None

None

12

12

0.799

0.828

71.9

72.1

0.225

0.231

0.50

0.40

2.2

1.7

1.2

1.1

<sup>1</sup>SalesSmoke

FTC Tar, mg/cigt.

Nicotine, mg/cigt.

Puffs/cigt.

Filtration Eff., %

CO, mg/cigt.

CigaretteTotal RTD, mm of H<sub>2</sub>O

Static Burn. Time, min.

Length, mm

Circumference, mm

Paper

Component Type

Component Percent

Permeability, ml/cm<sup>2</sup> x min.Filter

Type

RTD, mm of H<sub>2</sub>O

Length, mm

Weight, g

Tipping Paper

Length, mm

Tipping Paper Color

Ventilation, %

Filler

Total alkaloids, % (DWB)

Total red. sugars, % (DWB)

Reconstituted Tob., %

Expanded Stems, %

Expanded Tob., %

Wt. of Tob., g (12.5% OV)

Rod Length, mm

Rod Density, g/cc

Menthol, mg/cigt.

Smoke

Filler

Filter

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2050250439

**120 MM FILTER MENTHOL CIGARETTES**

(Brands Ranked by FTC Tar, left to right)

	<u>Carlton</u>	<u>More White Lights</u>	<u>Saratoga (Box)</u>
<b><sup>1</sup>Sales</b>	0.13	0.10	0.11
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	4.9	12.7	14.5
Nicotine, mg/cigt.	0.51	1.10	1.05
Puffs/cigt.	12.6	12.8	13.1
Filtration Eff., %	46	56	51
CO, mg/cigt.	3.9	16.4	14.6
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	88	166	133
Static Burn. Time, min.	6.3	8.6	8.0
Length, mm	119.7	119.9	119.5
Circumference, mm	22.2	21.1	23.1
<b><u>Paper</u></b>			
Component Type	Cit.	*	Cit.
Component Percent	0.8	-	0.5
Permeability, ml/cm <sup>2</sup> x min.	44	11	35
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	95	168	102
Length, mm	29.6	34.9	31.4
Weight, g	0.15	0.16	0.16
Tipping Paper			
Length, mm	35.0	36.0	36.0
Tipping Paper Color	White	White	Cork
Ventilation, %	70	41	30
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	2.19	2.09	1.93
Total red. sugars, % (DWB)	6.4	7.1	6.6
Reconstituted Tob., %	20	25	22
Expanded Stems, %	None	None	3
Expanded Tob., %	34	12	12
Wt. of Tob., g (12.5% OV)	0.775	0.717	0.900
Rod Length, mm	90.0	85.0	88.1
Rod Density, g/cc	0.219	0.237	0.240
<b><u>Menthol, mg/cigt.</u></b>			
Smoke	0.44	0.44	0.63
Filler	5.0	2.5	3.4
Filter	1.6	1.1	1.6

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

\*None detected.

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20502504A0

120 MM FILTER MENTHOL CIGARETTES

(Brands Ranked by FTC Tar, left to right)

Virginia Slims  
Lights (Box)

0.53

14.7

1.30

13.0

52

13.5

138

7.4

119.5

23.1

Cit.

0.5

33

CA

103

31.5

0.16

36.0

White

29

1.94

7.2

22

3

12

0.901

88.0

0.241

0.65

3.5

1.6

More

0.64

16.9

1.43

12.6

49

19.6

147

8.6

119.7

21.1

Cit.

1.5

17

CA

117

35.0

0.16

39.0

Brown

33

2.14

7.2

25

None

12

0.724

84.8

0.241

0.63

2.6

1.1

<sup>1</sup>SalesSmoke

FTC Tar, mg/cigt.

Nicotine, mg/cigt.

Puffs/cigt.

Filtration Eff., %

CO, mg/cigt.

CigaretteTotal RTD, mm of H<sub>2</sub>O

Static Burn. Time, min.

Length, mm

Circumference,

Paper

Component Type

Component Percent

Permeability, ml/cm<sup>2</sup> x min.Filter

Type

RTD, mm of H<sub>2</sub>O

Length, mm

Weight, g

Tipping Paper

Length, mm

Tipping Paper Color

Ventilation, %

Filler

Total alkaloids, % (DWB)

Total red. sugars, % (DWB)

Reconstituted Tob., %

Expanded Stems, %

Expanded Tob., %

Wt. of Tob., g (12.5% OV)

Rod Length, mm

Rod Density, g/cc

Menthol, mg/cigt.

Smoke

Filler

Filter

100  
SLIM

2050250441

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100 MM FILTER SLIM CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	Virginia Slims Ultra Lights (Box)	Virginia Slims Super- slims (Box)	Virginia Slims Lights (Box)
<sup>1</sup> Sales	0.71	0.17	0.89
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	5.8	5.9	8.9
Nicotine, mg/cigt.	0.50	0.51	0.70
Puffs/cigt.	9.9	8.9	9.7
Filtration Eff., %	57	31	53
CO, mg/cigt.	5.3	6.7	8.6
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	109	122	124
Static Burn. Time, min.	7.3	6.6	7.3
Length, mm	98.5	98.2	98.4
Circumference, mm	23.1	17.0	23.1
<b><u>Paper</u></b>			
Component Type	Cit.	Phosphorus	Cit.
Component Percent	0.4	0.2	0.5
Permeability, ml/cm <sup>2</sup> x min.	44	13	44
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	133	123	120
Length, mm	31.3	27.4	31.3
Weight, g	0.17	0.08	0.17
Tipping Paper			
Length, mm	36.0	32.0	36.0
Tipping Paper Color	White	White	White
Ventilation, %	57	66	40
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.92	2.10	1.93
Total red. sugars, % (DWB)	6.7	7.5	6.8
Reconstituted Tob., %	22	18	22
Expanded Stems, %	3	None	3
Expanded Tob., %	19	None	12
Wt. of Tob., g (12.5% OV)	0.649	0.422	0.683
Rod Length, mm	67.2	70.8	67.1
Rod Density, g/cc	0.228	0.258	0.239

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

100 MM FILTER SLIM CIGARETTES

(Brands Ranked by FTC Tar, left to right)

<u>Capri (Box)</u>	<u>More Lights (Box)</u>	<u>Virginia Slims</u>
0.43	0.07	1.02
9.3	10.2	14.6
0.76	0.81	1.07
9.0	9.7	9.9
29	49	42
5.7	9.1	12.9
143	102	121
7.0	7.7	7.5
96.6	97.7	99.4
17.2	22.7	23.0
Cit.	Cit.	Cit.
0.2	1.4	0.5
23	38	38
CA	CA	CA
105	97	78
26.8	30.8	27.5
0.07	0.15	0.15
32.0	35.0	32.0
White	Beige	White
51	42	20
1.96	1.90	1.91
5.8	5.9	6.9
19	25	22
None	None	3
None	12	12
0.434	0.648	0.730
69.9	66.8	71.9
0.265	0.237	0.240

**<sup>1</sup>Sales****Smoke**

FTC Tar, mg/cigt.

Nicotine, mg/cigt.

Puffs/cigt.

Filtration Eff., %

CO, mg/cigt.

**Cigarette**Total RTD, mm of H<sub>2</sub>O

Static Burn. Time, min.

Length, mm

Circumference, mm

**Paper**

Component Type

Component Percent

Permeability, ml/cm<sup>2</sup> x min.**Filter**

Type

RTD, mm of H<sub>2</sub>O

Length, mm

Weight, g

Tipping Paper

Length, mm

Tipping Paper Color

Ventilation, %

**Filler**

Total alkaloids, % (DWB)

Total red. sugars, % (DWB)

Reconstituted Tob., %

Expanded Stems, %

Expanded Tob., %

Wt. of Tob., g (12.5% OV)

Rod Length, mm

Rod Density, g/cc

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2050250443



100 MM FILTER SLIM MENTHOL CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	Virginia Slims Ultra Lights (Box)	Virginia Slims Superslims (Box)	Virginia Slims Lights (Box)
<sup>1</sup> Sales	0.57	0.24	1.02
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	6.1	6.7	9.0
Nicotine, mg/cigt.	0.52	0.54	0.70
Puffs/cigt.	10.1	9.2	9.9
Filtration Eff., %	57	31	55
CO, mg/cigt.	5.7	6.4	8.5
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	110	128	120
Static Burn. Time, min.	7.4	6.9	7.8
Length, mm	98.5	98.3	98.4
Circumference, mm	23.1	17.0	23.1
<b><u>Paper</u></b>			
Component Type	Cit.	Phosphorus	Cit.
Component Percent	0.5	2.3	0.6
Permeability, ml/cm <sup>2</sup> x min.	30	13	43
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	138	125	118
Length, mm	31.4	27.4	31.3
Weight, g	0.18	0.08	0.17
Tipping Paper			
Length, mm	36.0	32.0	36.0
Tipping Paper Color	White	White	White
Ventilation, %	59	70	41
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.92	2.10	1.96
Total red. sugars, % (DWB)	6.9	6.7	7.0
Reconstituted Tob., %	22	18	22
Expanded Stems, %	3	None	3
Expanded Tob., %	19	None	12
Wt. of Tob., g (12.5% OV)	0.648	0.427	0.679
Rod Length, mm	67.2	70.9	67.1
Rod Density, g/cc	0.226	0.262	0.238
<b><u>Menthol, mg/cigt.</u></b>			
Smoke	0.41	0.68	0.50
Filler	3.3	4.3	3.2
Filter	2.1	1.8	2.1

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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2050250444

100 MM FILTER SLIM MENTHOL CIGARETTES

(Brands Ranked by FTC Tar, left to right)

<u>Salem Slim Lights (Box)</u>	<u>More Lights (Box)</u>	<u>Virginia Slims</u>
1.06	0.06	0.90
9.1	9.6	14.9
0.72	0.73	1.07
8.8	9.5	10.1
49	49	46
8.6	9.4	12.8
109	101	122
7.0	7.2	7.4
97.8	97.7	99.4
22.7	22.7	23.1
Cit.	Cit.	Cit.
0.9	1.4	0.5
36	41	45
CA	CA	CA
97	98	78
30.8	30.8	27.4
0.15	0.14	0.15
35.0	35.0	32.0
White	Beige	White
40	43	19
1.86	1.82	1.93
7.2	6.6	6.8
25	25	22
None	None	3
15	12	12
0.635	0.644	0.730
67.0	66.9	72.0
0.231	0.235	0.239
0.52	0.51	0.64
3.1	2.8	2.8
1.8	1.6	1.4

<sup>1</sup>SalesSmoke

FTC Tar, mg/cigt.  
 Nicotine, mg/cigt.  
 Puffs/cigt.  
 Filtration Eff., %  
 CO, mg/cigt.

Cigarette

Total RTD, mm of H<sub>2</sub>O  
 Static Burn. Time, min.  
 Length, mm  
 Circumference, mm

Paper

Component Type  
 Component Percent  
 Permeability, ml/cm<sup>2</sup> x min.

Filter

Type  
 RTD, mm of H<sub>2</sub>O  
 Length, mm  
 Weight, g  
 Tipping Paper  
 Length, mm  
 Tipping Paper Color  
 Ventilation, %

Filler

Total alkaloids, % (DWB)  
 Total red. sugars, % (DWB)  
 Reconstituted Tob., %  
 Expanded Stems, %  
 Expanded Tob., %  
 Wt. of Tob., g (12.5% OV)  
 Rod Length, mm  
 Rod Density, g/cc

Menthol, mg/cigt.

Smoke  
 Filler  
 Filter

CHARCOAL

2050250445

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KING SIZE CHARCOAL FILTER CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Lark Lights</u>	<u>Tareyton</u>
<sup>1</sup> Sales	0.14	0.55
<b><u>Smoke</u></b>		
FTC Tar, mg/cigt.	11.4	14.6
Nicotine, mg/cigt.	0.88	1.05
Puffs/cigt.	7.3	8.6
Filtration Eff., %	42	50
Gas Phase Smoke Index, % Reduction	24	21
CO, mg/cigt.	9.7	15.2
<b><u>Cigarette</u></b>		
Total RTD, mm of H <sub>2</sub> O	116	122
Static Burn. Time, min.	7.0	7.2
Length, mm	83.9	84.8
Circumference, mm	24.7	25.0
<b><u>Paper</u></b>		
Component Type	Cit.	Cit.
Component Percent	0.5	0.9
Permeability, ml/cm <sup>2</sup> x min.	215**	50
<b><u>Filter</u></b>		
Type	_*	-
Inner	CA	C on Paper
Outer	CA	CA
RTD, mm of H <sub>2</sub> O	62	63
Length, mm	24.6	19.9
Weight, g	0.17	0.17
Carbon, mg/plug	50	33
Tipping Paper		
Length, mm	30.0	24.0
Tipping Paper Color	Cork	Cork
Ventilation, %	None	None
<b><u>Filler</u></b>		
Total alkaloids, % (DWB)	2.04	2.06
Total red. sugars, % (DWB)	6.6	7.2
Reconstituted Tob., %	15	22
Expanded Stems, %	5	None
Expanded Tob., %	23	15
Wt. of Tob., g (12.5% OV)	0.618	0.759
Rod Length, mm	59.3	64.9
Rod Density, g/cc	0.214	0.236

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

\*Space containing carbon granules.

\*\*These cigarette papers are perforated.

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100 MM CHARCOAL FILTER CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Lark Lights</u>	<u>Parliament Lights</u>
<sup>1</sup> Sales	0.11	0.74
<b><u>Smoke</u></b>		
FTC Tar, mg/cigt.	11.8	12.1
Nicotine, mg/cigt.	0.99	1.13
Puffs/cigt.	8.6	10.1
Filtration Eff., %	46	54
Gas Phase Smoke Index, % Reduction	25	63
CO, mg/cigt.	10.5	11.6
<b><u>Cigarette</u></b>		
Total RTD, mm of H <sub>2</sub> O	125	119
Static Burn. Time, min.	6.9	7.7
Length, mm	98.8	98.5
Circumference, mm	24.7	24.9
<b><u>Paper</u></b>		
Component Type	Cit.	Cit.
Component Percent	0.5	0.5
Permeability, ml/cm <sup>2</sup> x min.	218**	30
<b><u>Filter</u></b>		
Type	.*	-
Inner	CA	C on CA
Outer	CA	CA
RTD, mm of H <sub>2</sub> O	73	112
Length, mm	29.6	29.9 <sup>2</sup>
Weight, g	0.18	0.22
Carbon, mg/plug	51	56
Tipping Paper		
Length, mm	35.0	36.0
Tipping Paper Color	Cork	White
Ventilation, %	None	32
<b><u>Filler</u></b>		
Total alkaloids, % (DWB)	2.10	1.97
Total red. sugars, % (DWB)	6.4	6.6
Reconstituted Tob., %	15	22
Expanded Stems, %	5	3
Expanded Tob., %	23	12
Wt. of Tob., g (12.5% OV)	0.728	0.804
Rod Length, mm	69.2	68.5
Rod Density, g/cc	0.216	0.237

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.<sup>2</sup>The reported value includes the recessed portion.

\*Space containing carbon granules.

\*\*These cigarette papers are perforated.

LS FILTER  
NONFILTER

2050250447

PHILIP MORRIS U.S.A.  
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LONG SIZE FILTER CIGARETTES (BOX)

(Brands Ranked by FTC Tar, left to right)

	<u>Parliament Lights</u>	<u>Camel Lights Wides (Box)</u>	<u>Newport</u>	<u>Marlboro</u>
<sup>1</sup> Sales	0.80	0.50	3.20	14.62
<b><u>Smoke</u></b>				
FTC Tar, mg/cigt.	8.8	11.2	15.7	15.8
Nicotine, mg/cigt.	0.69	0.94	1.14	1.10
Puffs/cigt.	7.8	9.2	7.4	8.8
Filtration Eff., %	54	58	44	42
CO, mg/cigt.	9.4	12.3	14.8	13.3
<b><u>Cigarette</u></b>				
Total RTD, mm of H <sub>2</sub> O	115	116	115	107
Static Burn. Time, min.	7.9	8.4	7.7	8.2
Length, mm	79.1	79.1	80.3	79.3
Circumference, mm	24.9	27.1	24.9	24.9
<b><u>Paper</u></b>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.5	0.6	0.7	0.5
Permeability, ml/cm <sup>2</sup> x min.	46	25	18	40
<b><u>Filter</u></b>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	119	88	61	67
Length, mm	25.0 <sup>2</sup>	19.0	21.0	19.0
Weight, g	0.13	0.16	0.12	0.12
Tipping Paper				
Length, mm	30.0	23.0	25.0	23.0
Tipping Paper Color	White	Cork	Cork	Cork
Ventilation, %	36	26	None	13
<b><u>Filler</u></b>				
Total alkaloids, % (DWB)	2.01	2.08	2.17	1.98
Total red. sugars, % (DWB)	5.9	6.2	7.4	6.8
Reconstituted Tob., %	22	25	22	22
Expanded Stems, %	3	None	None	3
Expanded Tob., %	12	25	12	12
Wt. of Tob., g (12.5% OV)	0.626	0.817	0.672	0.697
Rod Length, mm	54.1	60.1	59.3	60.3
Rod Density, g/cc	0.235	0.232	0.229	0.234
<b><u>Menthol, mg/cigt.</u></b>				
Smoke	-	-	0.39	-
Filler	-	-	1.4	-
Filter	-	-	0.9	-

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.<sup>2</sup>The reported value includes the recessed portion.

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NON-FILTER CIGARETTES

	<u>Camel</u>	<u>Lucky Strike</u>	<u>Chester- field King</u>	<u>Pall Mall</u>	<u>Commander King Size</u>
<sup>1</sup> Sales	2.47	0.81	0.30	3.03	0.09
<b><u>Smoke</u></b>					
FTC Tar, mg/cigt.	20.9	25.0	20.3	24.0	24.2
Nicotine, mg/cigt.	1.51	1.74	1.40	1.71	1.70
Puffs/cigt.	7.3	8.7	8.6	9.9	9.1
CO, mg/cigt.	10.6	14.6	11.4	13.7	13.7
<b><u>Cigarette</u></b>					
Total RTD, mm of H <sub>2</sub> O	60	67	76	69	59
Static Burn. Time, min.	7.7	9.3	7.2	8.0	7.6
Length, mm	69.5	69.4	80.6	84.1	84.0
Circumference, mm	24.9	25.0	25.0	24.9	24.9
<b><u>Paper</u></b>					
Component Type	Cit.	Phosphorus	Cit.	Cit.	Cit.
Component Percent	0.5	0.2	0.6	0.8	2.3
Permeability, ml/cm <sup>2</sup> x min.	24	16	44	33	43
<b><u>Filler</u></b>					
Total alkaloids, % (DWB)	2.08	1.92	1.89	2.01	2.00
Total red. sugars, % (DWB)	7.3	8.9	10.0	8.8	8.6
Reconstituted Tob., %	15	20	10	20	22
Expanded Stems, %	None	None	5	None	3
Expanded Tob., %	12	11	19	11	12
Wt. of Tob., g (12.5% OV)	0.785	0.899	0.916	1.033	0.969
Rod Density, g/cc	0.229	0.260	0.229	0.249	0.234

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

DISCOUNT

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PHILIP MORRIS U.S.A.  
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KING SIZE DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Cambridge Lowest</u>	<u>Doral Ultra Lights</u>	<u>Raleigh Extra Ultra Lights</u>
<sup>1</sup> Sales	0.07	0.49	0.09
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	1.2	5.6	6.2
Nicotine, mg/cigt.	0.15	0.52	0.50
Puffs/cigt.	6.8	10.0	7.8
Filtration Eff., %	74	60	58
CO, mg/cigt.	1.1	5.6	7.5
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	91	93	107
Static Burn. Time, min.	5.9	8.9	7.7
Length, mm	84.1	83.9	83.9
Circumference, mm	24.9	24.8	24.9
<b><u>Paper</u></b>			
Component Type	Cit.	Phosphorus	Cit.
Component Percent	1.6	0.2	0.6
Permeability, ml/cm <sup>2</sup> x min.	45	24	47
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	137	114	110
Length, mm	26.9	26.9	26.8
Weight, g	0.16	0.17	0.17
Tipping Paper			
Length, mm	32.0	31.0	32.0
Tipping Paper Color	White	White	White
Ventilation, %	74	59	45
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	2.38	1.97	1.67
Total red. sugars, % (DWB)	5.3	6.2	6.9
Reconstituted Tob., %	11	32	16
Expanded Stems, %	None	None	5
Expanded Tob., %	43	15	None
Wt. of Tob., g (12.5% OV)	0.508	0.662	0.658
Rod Length, mm	57.3	57.1	57.1
Rod Density, g/cc	0.179	0.236	0.234

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

KING SIZE DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

<u>Sterling Lights</u>	<u>Doral Lights</u>	<u>Bucks Lights</u>
0.08	1.52	0.24
9.6	9.6	10.3
0.75	0.81	0.74
7.2	8.1	7.4
55	52	58
11.4	9.5	11.8
108	96	122
8.5	8.1	7.8
83.8	84.0	84.0
24.9	24.9	24.9
Cit.	Cit.	Cit.
0.5	0.5	0.6
24	25	30
CA	CA	CA
84	86	100
26.7	26.8	26.9
0.15	0.16	0.17
31.0	31.0	31.0
White	Cork	Cork
23	34	15
1.91	2.02	2.02
5.7	6.2	7.7
32	32	22
None	None	5
21	15	15
0.613	0.662	0.636
57.0	57.2	57.1
0.218	0.235	0.225

<sup>1</sup>SalesSmoke

FTC Tar, mg/cigt.  
 Nicotine, mg/cigt.  
 Puffs/cigt.  
 Filtration Eff., %  
 CO, mg/cigt.

Cigarette

Total RTD, mm of H<sub>2</sub>O  
 Static Burn. Time, min.  
 Length, mm  
 Circumference, mm

Paper

Component Type  
 Component Percent  
 Permeability, ml/cm<sup>2</sup> x min.

Filter

Type  
 RTD, mm of H<sub>2</sub>O  
 Length, mm  
 Weight, g  
 Tipping Paper  
 Length, mm  
 Tipping Paper Color  
 Ventilation, %

Filler

Total alkaloids, % (DWB)  
 Total red. sugars, % (DWB)  
 Reconstituted Tob., %  
 Expanded Stems, %  
 Expanded Tob., %  
 Wt. of Tob., g (12.5% OV)  
 Rod Length, mm  
 Rod Density, g/cc

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KING SIZE DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Magna Lites (Box)</u>	<u>Pyramid Lights</u>	<u>Magna Lites</u>
<sup>1</sup> Sales	0.20	0.34	0.31
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	10.6	10.6	10.7
Nicotine, mg/cigt.	0.77	0.83	0.84
Puffs/cigt.	6.6	8.0	7.2
Filtration Eff., %	50	51	53
CO, mg/cigt.	12.0	11.4	11.6
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	120	131	113
Static Burn. Time, min.	7.3	8.0	7.6
Length, mm	83.0	83.7	84.1
Circumference, mm	24.5	24.8	24.9
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.6	0.5
Permeability, ml/cm <sup>2</sup> x min.	24	75	24
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	83	89	84
Length, mm	26.8	24.7	26.9
Weight, g	0.17	0.15	0.16
Tipping Paper			
Length, mm	31.0	30.0	31.0
Tipping Paper Color	Cork	Cork	White
Ventilation, %	12	25	18
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	2.02	1.95	1.98
Total red. sugars, % (DWB)	5.6	7.3	5.0
Reconstituted Tob., %	32	15	32
Expanded Stems, %	None	5	None
Expanded Tob., %	21	23	21
Wt. of Tob., g (12.5% OV)	0.576	0.622	0.624
Rod Length, mm	56.2	59.0	57.2
Rod Density, g/cc	0.215	0.216	0.222

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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# KING SIZE DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

<u>Bull Durham Lights (Box)</u>	<u>Bristol Lights</u>	<u>Raleigh Extra Lights</u>	<sup>1</sup> Sales
0.16	0.48	0.28	
10.7	10.7	10.8	<b><u>Smoke</u></b>
0.86	0.88	0.76	FTC Tar, mg/cigt.
8.1	7.0	7.1	Nicotine, mg/cigt.
49	54	54	Puffs/cigt.
10.0	11.4	11.3	Filtration Eff., %
			CO, mg/cigt.
126	115	108	<b><u>Cigarette</u></b>
7.6	7.8	7.3	Total RTD, mm of H <sub>2</sub> O
83.2	84.1	83.9	Static Burn. Time, min.
24.9	24.9	24.9	Length, mm
			Circumference, mm
Cit.	Cit.	Cit.	<b><u>Paper</u></b>
0.8	0.5	0.6	Component Type
51	23	45	Component Percent
			Permeability, ml/cm <sup>2</sup> x min.
CA	CA	CA	<b><u>Filter</u></b>
87	98	85	Type
24.9	27.0	26.7	RTD, mm of H <sub>2</sub> O
0.18	0.16	0.15	Length, mm
			Weight, g
30.0	32.0	32.0	Tipping Paper
Cork	Cork	Cork	Length, mm
25	14	20	Tipping Paper Color
			Ventilation, %
1.90	2.08	1.71	<b><u>Filler</u></b>
7.3	5.8	6.3	Total alkaloids, % (DWB)
22	20	22	Total red. sugars, % (DWB)
None	10	3	Reconstituted Tob., %
15	None	4	Expanded Stems, %
0.698	0.603	0.654	Expanded Tob., %
58.3	57.1	57.2	Wt. of Tob., g (12.5% OV)
0.242	0.214	0.232	Rod Length, mm
			Rod Density, g/cc

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KING SIZE DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Cambridge Lights</u>	<u>Vicory Lights (Box)</u>	<u>Montclair Lights</u>
<sup>1</sup> Sales	0.84	0.11	0.34
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	11.2	11.2	11.8
Nicotine, mg/cigt.	0.83	0.84	0.93
Puffs/cigt.	8.1	8.1	8.1
Filtration Eff., %	53	55	49
CO, mg/cigt.	11.9	11.9	11.0
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	120	133	124
Static Burn. Time, min.	8.1	8.1	8.1
Length, mm	84.1	83.4	83.0
Circumference, mm	24.9	24.9	25.0
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.8	0.9
Permeability, ml/cm <sup>2</sup> x min.	23	29	26
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	97	101	86
Length, mm	26.8	27.0	25.0
Weight, g	0.16	0.16	0.18
Tipping Paper			
Length, mm	31.0	32.0	30.0
Tipping Paper Color	Cork	Cork	White
Ventilation, %	10	20	19
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.85	1.81	1.89
Total red. sugars, % (DWB)	6.7	6.7	7.1
Reconstituted Tob., %	20	16	22
Expanded Stems, %	10	5	None
Expanded Tob., %	None	None	15
Wt. of Tob., g (12.5% OV)	(0.630)	0.702	0.699
Rod Length, mm	57.3	56.3	58.0
Rod Density, g/cc	(0.223)	0.254	0.243

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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KING SIZE DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

<u>Sterling</u>	<u>Magna (Box)</u>	<u>Magna</u>
0.07	0.40	0.56
13.6	13.8	14.0
0.99	0.98	1.00
7.9	7.4	7.9
45	43	46
13.8	13.9	14.6
115	114	114
8.3	7.3	7.3
84.1	82.9	84.0
24.9	24.5	24.9
Cit.	Cit.	Cit.
0.5	0.5	0.5
24	23	23
CA	CA	CA
65	64	62
21.2	21.1	20.9
0.12	0.12	0.12
25.0	25.0	25.0
White	Cork	Cork
9	8	8
1.92	1.91	1.95
5.2	5.5	5.7
32	32	32
None	None	None
21	21	21
0.694	0.643	0.696
62.9	61.8	63.1
0.224	0.218	0.224

<sup>1</sup>SalesSmoke

FTC Tar, mg/cigt.  
 Nicotine, mg/cigt.  
 Puffs/cigt.  
 Filtration Eff., %  
 CO, mg/cigt.

Cigarette

Total RTD, mm of H<sub>2</sub>O  
 Static Burn. Time, min.  
 Length, mm  
 Circumference, mm

Paper

Component Type  
 Component Percent  
 Permeability, ml/cm<sup>2</sup> x min.

Filter

Type  
 RTD, mm of H<sub>2</sub>O  
 Length, mm  
 Weight, g  
 Tipping Paper  
 Length, mm  
 Tipping Paper Color  
 Ventilation, %

Filler

Total alkaloids, % (DWB)  
 Total red. sugars, % (DWB)  
 Reconstituted Tob., %  
 Expanded Stems, %  
 Expanded Tob., %  
 Wt. of Tob., g (12.5% OV)  
 Rod Length, mm  
 Rod Density, g/cc

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2050250455

KING SIZE DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Bucks</u>	<u>Bull Durham (Box)</u>	<u>Pyramid Full Flavor</u>
<sup>1</sup> Sales	0.30	0.19	0.21
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	14.0	14.2	14.5
Nicotine, mg/cigt.	1.03	1.05	1.20
Puffs/cigt.	8.1	7.7	9.1
Filtration Eff., %	44	50	44
CO, mg/cigt.	13.1	14.4	12.6
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	108	120	113
Static Burn. Time, min.	7.4	8.0	9.6
Length, mm	84.0	83.0	83.7
Circumference, mm	24.9	25.0	24.7
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	*
Citrate	0.5	0.8	-
Permeability, ml/cm <sup>2</sup> x min.	47	20	227**
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	70	70	65
Length, mm	20.9	24.8	24.7
Weight, g	0.12	0.16	0.14
Tipping Paper			
Length, mm	25.0	30.0	30.0
Tipping Paper Color	Cork	Cork	Cork
Ventilation, %	12	10	None
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.98	1.90	1.97
Total red. sugars, % (DWB)	7.4	7.6	7.0
Reconstituted Tob., %	22	22	15
Expanded Stems, %	5	None	5
Expanded Tob., %	15	15	23
Wt. of Tob., g (12.5% OV)	0.703	0.708	0.619
Rod Length, mm	63.1	58.2	59.0
Rod Density, g/cc	0.226	0.244	0.216

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

\*None detected.

\*\*These cigarette papers are perforated.

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# KING SIZE DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

<u>Doral</u> <u>Full Flavor</u>	<u>Montclair</u>	<u>Bristol</u> <u>Full Flavor</u>
1.19	0.37	0.51
14.8	15.2	15.4
1.13	1.17	1.01
8.7	8.8	8.4
46	41	44
14.5	13.2	15.8
106	111	106
8.0	7.4	7.6
84.2	84.8	84.0
24.8	24.9	24.8
Cit.	Cit.	Cit.
0.5	0.8	0.5
24	53	(32)
CA	CA	CA
69	60	71
21.0	19.9	21.1
0.12	0.13	0.12
25.0	24.0	25.0
Cork	Cork	Cork
13	13	None
2.00	2.03	1.91
6.4	8.2	5.8
32	22	20
None	None	10
15	15	None
0.730	0.759	0.666
63.3	64.9	63.0
0.235	0.236	0.215

## <sup>1</sup>Sales

## Smoke

FTC Tar, mg/cigt.  
Nicotine, mg/cigt.  
Puffs/cigt.  
Filtration Eff., %  
CO, mg/cigt.

## Cigarette

Total RTD, mm of H<sub>2</sub>O  
Static Burn. Time, min.  
Length, mm  
Circumference, mm

## Paper

Component Type  
Component Percent  
Permeability, ml/cm<sup>2</sup> x min.

## Filter

Type  
RTD, mm of H<sub>2</sub>O  
Length, mm  
Weight, g  
Tipping Paper  
Length, mm  
Tipping Paper Color  
Ventilation, %

## Filler

Total alkaloids, % (DWB)  
Total red. sugars, % (DWB)  
Reconstituted Tob., %  
Expanded Stems, %  
Expanded Tob., %  
Wt. of Tob., g (12.5% OV)  
Rod Length, mm  
Rod Density, g/cc

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KING SIZE DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Cambridge Full Flavor</u>	<u>Viceroy</u>	<u>Raleigh Extra</u>	<u>Bristol (NF)</u>
<sup>1</sup> Sales	0.65	1.03	0.41	0.18
<b><u>Smoke</u></b>				
FTC Tar, mg/cigt.	16.1	16.5	16.7	25.1
Nicotine, mg/cigt.	1.10	1.20	1.06	1.72
Puffs/cigt.	8.2	8.5	7.6	8.9
Filtration Eff., %	47	47	42	-
CO, mg/cigt.	14.8	14.3	14.6	13.4
<b><u>Cigarette</u></b>				
Total RTD, mm of H <sub>2</sub> O	109	117	101	56
Static Burn. Time, min.	7.5	7.8	7.0	7.6
Length, mm	84.1	83.7	83.6	84.2
Circumference, mm	25.0	24.9	24.8	24.9
<b><u>Paper</u></b>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.5	0.5	0.6	2.3
Permeability, ml/cm <sup>2</sup> x min.	35	23	46	43
<b><u>Filter</u></b>				
Type	CA	CA	CA	-
RTD, mm of H <sub>2</sub> O	71	74	55	-
Length, mm	20.8	20.9	20.7	-
Weight, g	0.12	0.12	0.12	-
Tipping Paper				
Length, mm	25.0	26.0	26.0	-
Tipping Paper Color	Cork	Cork	Cork	-
Ventilation, %	None	10	None	-
<b><u>Filler</u></b>				
Total alkaloids, % (DWB)	1.86	1.84	1.71	1.98
Total red. sugars, % (DWB)	6.0	6.2	6.2	8.1
Reconstituted Tob., %	20	15	22	22
Expanded Stems, %	10	7	3	3
Expanded Tob., %	None	11	4	12
Wt. of Tob., g (12.5% OV)	0.686	0.738	0.723	0.968
Rod Length, mm	63.3	62.8	62.9	84.2
Rod Density, g/cc	0.218	0.239	0.234	0.232

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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KING SIZE MENTHOL DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Raleigh Extra Lights</u>	<u>Alpine Lights</u>	<u>Doral Lights</u>
<sup>1</sup> Sales	0.09	0.26	0.67
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	9.5	9.5	9.6
Nicotine, mg/cigt.	0.71	0.74	0.81
Puffs/cigt.	6.5	7.7	8.6
Filtration Eff., %	49	52	52
CO, mg/cigt.	9.4	9.4	9.9
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	106	109	94
Static Burn. Time, min.	6.9	7.8	8.0
Length, mm	84.0	84.0	84.1
Circumference, mm	24.8	25.0	24.9
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.6	0.5	0.5
Permeability, ml/cm <sup>2</sup> x min.	47	30	23
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	76	88	87
Length, mm	26.7	26.9	26.9
Weight, g	0.14	0.17	0.15
Tipping Paper			
Length, mm	32.0	31.0	31.0
Tipping Paper Color	White	White	Cork
Ventilation, %	20	27	38
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.90	1.88	2.11
Total red. sugars, % (DWB)	5.3	8.4	6.0
Reconstituted Tob., %	22	22	32
Expanded Stems, %	3	5	None
Expanded Tob., %	4	15	15
Wt. of Tob., g (12.5% OV)	0.616	0.647	0.677
Rod Length, mm	57.3	57.0	57.3
Rod Density, g/cc	0.219	0.229	0.239
<b><u>Menthol, mg/cigt.</u></b>			
Smoke	0.41	0.52	0.50
Filler	2.0	2.5	2.7
Filter	1.5	2.0	1.6

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.



KING SIZE MENTHOL DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Sterling Lights</u>	<u>Bristol Lights</u>	<u>Cambridge Lights</u>
<sup>1</sup> Sales	0.05	0.19	0.30
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	10.1	10.5	11.3
Nicotine, mg/cigt.	0.79	0.87	0.82
Puffs/cigt.	7.1	7.2	7.9
Filtration Eff., %	50	54	51
CO, mg/cigt.	11.1	10.8	12.4
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	119	109	109
Static Burn. Time, min.	7.2	7.6	7.8
Length, mm	84.1	84.0	83.9
Circumference, mm	25.0	24.8	25.0
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.6	0.5
Permeability, ml/cm <sup>2</sup> x min.	23	23	28
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	82	95	95
Length, mm	26.9	27.0	26.7
Weight, g	0.14	0.17	0.16
Tipping Paper			
Length, mm	31.0	32.0	31.0
Tipping Paper Color	White	White	White
Ventilation, %	18	18	21
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.93	2.22	1.88
Total red. sugars, % (DWB)	5.8	5.8	6.3
Reconstituted Tob., %	32	20	20
Expanded Stems, %	None	10	10
Expanded Tob., %	21	None	None
Wt. of Tob., g (12.5% OV)	0.620	0.605	0.666
Rod Length, mm	57.3	57.1	57.3
Rod Density, g/cc	0.218	0.216	0.234
<b><u>Menthol, mg/cigt.</u></b>			
Smoke	0.44	0.46	0.54
Filler	2.0	2.1	2.4
Filter	1.8	1.8	1.8

<sup>1</sup>Second quarter sales in billion of cigarettes - Philip Morris Product Evaluation Division.

# KING SIZE MENTHOL DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

<u>Montclair Lights</u>	<u>Sterling</u>	<u>Alpine</u>
0.17	0.06	0.24
11.4	14.1	14.5
0.90	1.05	0.97
8.3	7.8	7.5
48	45	43
11.0	13.1	15.1
128	107	118
7.8	7.3	7.4
83.1	83.9	84.0
24.9	24.9	24.9
Cit.	Cit.	Cit.
0.9	0.5	1.8
28	24	46
CA	CA	CA
89	65	63
25.3	20.9	20.9
0.18	0.11	0.13
30.0	25.0	25.0
White	White	White
21	8	None
1.93	1.98	1.96
7.1	5.3	7.7
22	32	22
None	None	5
15	21	15
0.701	0.690	0.714
57.9	63.0	63.1
0.245	0.222	0.229
0.50	0.51	0.56
2.2	1.9	2.0
1.7	1.0	1.1

## <sup>1</sup>Sales

### Smoke

FTC Tar, mg/cigt.

Nicotine, mg/cigt.

Puffs/cigt.

Filtration Eff., %

CO, mg/cigt.

### Cigarette

Total RTD, mm of H<sub>2</sub>O

Static Burn. Time, min.

Length, mm

Circumference, mm

### Paper

Component Type

Citrate

Permeability, ml/cm<sup>2</sup> x min.

### Filter

Type

RTD, mm of H<sub>2</sub>O

Length, mm

Weight, g

Tipping Paper

Length, mm

Tipping Paper Color

Ventilation, %

### Filler

Total alkaloids, % (DWB)

Total red. sugars, % (DWB)

Reconstituted Tob., %

Expanded Stems, %

Expanded Tob., %

Wt. of Tob., g (12.5% OV)

Rod Length, mm

Rod Density, g/cc

### Menthol, mg/cigt.

Smoke

Filler

Filter

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**KING SIZE MENTHOL DISCOUNT CIGARETTES**

(Brands Ranked by FTC Tar, left to right)

	<u>Pyramid Full Flavor</u>	<u>Doral Full Flavor</u>
<sup>1</sup> Sales	0.07	0.41
<b><u>Smoke</u></b>		
FTC Tar, mg/cigt.	14.7	14.8
Nicotine, mg/cigt.	1.20	1.11
Puffs/cigt.	8.8	8.8
Filtration Eff., %	45	46
CO, mg/cigt.	12.2	14.4
<b><u>Cigarette</u></b>		
Total RTD, mm of H <sub>2</sub> O	113	98
Static Burn. Time, min.	9.0	7.9
Length, mm	83.8	83.9
Circumference, mm	24.7	24.9
<b><u>Paper</u></b>		
Component Type	Phosphorus	Cit.
Component Percent	0.1	0.5
Permeability, ml/cm <sup>2</sup> x min.	199*	22
<b><u>Filter</u></b>		
Type	CA	CA
RTD, mm of H <sub>2</sub> O	64	65
Length, mm	24.8	20.9
Weight, g	0.14	0.12
Tipping Paper		
Length, mm	30.0	25.0
Tipping Paper Color	Cork	Cork
Ventilation, %	None	15
<b><u>Filler</u></b>		
Total alkaloids, % (DWB)	1.91	1.95
Total red. sugars, % (DWB)	7.6	6.5
Reconstituted Tob., %	15	32
Expanded Stems, %	5	None
Expanded Tob., %	23	15
Wt. of Tob., g (12.5% OV)	0.634	0.728
Rod Length, mm	59.0	63.1
Rod Density, g/cc	0.221	0.234
<b><u>Menthol, mg/cigt.</u></b>		
Smoke	0.40	0.46
Filler	1.4	1.9
Filter	1.3	0.9

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

\*These cigarette papers are perforated.

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2050250462

100 MM DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Cambridge Lowest</u>	<u>Sterling Ultra Lights</u>	<u>Pyramid Ultra Lights</u>
<sup>1</sup> Sales	0.16	0.17	0.36
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	1.8	4.4	5.4
Nicotine, mg/cigt.	0.21	0.43	0.54
Puffs/cigt.	7.9	9.6	9.6
Filtration Eff., %	74	64	49
CO, mg/cigt.	2.5	6.3	4.3
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	105	106	81
Static Burn. Time, min.	5.3	7.1	6.7
Length, mm	99.2	98.7	99.1
Circumference, mm	24.9	24.8	24.8
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	1.5	0.5	0.7
Permeability, ml/cm <sup>2</sup> x min.	43	24	29
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	153	132	81
Length, mm	31.2	30.8	29.7
Weight, g	0.18	0.20	0.17
Tipping Paper			
Length, mm	36.0	35.0	35.0
Tipping Paper Color	White	White	White
Ventilation, %	68	58	62
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	2.43	1.89	1.98
Total red. sugars, % (DWB)	5.6	5.9	7.3
Reconstituted Tob., %	11	32	15
Expanded Stems, %	None	None	5
Expanded Tob., %	43	21	23
Wt. of Tob., g (12.5% OV)	0.604	0.730	0.728
Rod Length, mm	68.0	67.9	69.4
Rod Density, g/cc	0.180	0.219	0.215

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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100 MM DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Doral Ultra Lights</u>	<u>Bristol Ultra Lights</u>	<u>Cambridge Ultra Low Tar</u>
<sup>1</sup> Sales	1.21	0.33	0.87
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	5.6	5.6	5.7
Nicotine, mg/cigt.	0.52	0.54	0.49
Puffs/cigt.	11.6	9.8	10.8
Filtration Eff., %	65	63	66
CO, mg/cigt.	6.6	7.2	7.1
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	104	108	106
Static Burn. Time, min.	8.5	7.1	7.7
Length, mm	98.6	99.4	99.5
Circumference, mm	24.8	24.9	25.0
<b><u>Paper</u></b>			
Component Type	Phosphorus	Cit.	Cit.
Component Percent	0.2	0.5	0.5
Permeability, ml/cm <sup>2</sup> x min.	25	26	27
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	135	133	134
Length, mm	30.7	31.1	31.2
Weight, g	0.19	0.20	0.20
Tipping Paper			
Length, mm	35.0	36.0	36.0
Tipping Paper Color	White	White	White
Ventilation, %	61	52	56
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	1.96	2.18	1.92
Total red. sugars, % (DWB)	6.5	6.1	7.4
Reconstituted Tob., %	32	20	20
Expanded Stems, %	None	10	10
Expanded Tob., %	15	None	None
Wt. of Tob., g (12.5% OV)	0.803	0.729	0.793
Rod Length, mm	67.9	68.3	68.3
Rod Density, g/cc	0.242	0.216	0.234

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

# 100 MM DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

<u>Montclair Ultra Lights</u>	<u>Raleigh Extra Ultra Lights</u>	<u>Misty Lights Slims (Box)</u>
0.44	0.16	0.77
6.2	6.3	8.9
0.56	0.53	0.76
9.4	9.7	9.2
62	59	47
8.6	7.0	8.0
146	99	119
6.8	7.3	7.2
99.5	99.0	98.8
24.4	24.9	23.1
Cit.	Cit.	Cit.
0.8	0.6	0.7
28	45	49
CA	CA	CA
133	113	100
30.5	29.8	31.8
0.19	0.18	0.17
35.0	36.0	36.0
White	White	White
35	55	36
1.95	1.66	1.88
6.1	6.2	7.0
24	16	22
None	5	None
24	None	15
0.677	0.792	0.695
69.0	69.1	67.1
0.207	0.232	0.244

## <sup>1</sup>Sales

## Smoke

FTC Tar, mg/cigt.  
Nicotine, mg/cigt.  
Puffs/cigt.  
Filtration Eff., %  
CO, mg/cigt.

## Cigarette

Total RTD, mm of H<sub>2</sub>O  
Static Burn. Time, min.  
Length, mm  
Circumference, mm

## Paper

Component Type  
Component Percent  
Permeability, ml/cm<sup>2</sup> x min.

## Filter

Type  
RTD, mm of H<sub>2</sub>O  
Length, mm  
Weight, g  
Tipping Paper  
Length, mm  
Tipping Paper Color  
Ventilation, %

## Filler

Total alkaloids, % (DWB)  
Total red. sugars, % (DWB)  
Reconstituted Tob., %  
Expanded Stems, %  
Expanded Tob., %  
Wt. of Tob., g (12.5% OV)  
Rod Length, mm  
Rod Density, g/cc

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# 100 MM DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Bristol Lights</u>	<u>Sterling Lights</u>	<u>Pyramid Lights</u>
<sup>1</sup> Sales	0.60	0.45	0.44
<b><u>Smoke</u></b>			
FTC Tar, mg/cigt.	10.6	10.8	11.0
Nicotine, mg/cigt.	0.86	0.86	0.94
Puffs/cigt.	9.1	8.9	9.6
Filtration Eff., %	58	50	52
CO, mg/cigt.	12.4	11.3	11.3
<b><u>Cigarette</u></b>			
Total RTD, mm of H <sub>2</sub> O	116	99	107
Static Burn. Time, min.	7.2	7.2	7.8
Length, mm	99.3	99.0	98.9
Circumference, mm	24.9	24.8	24.8
<b><u>Paper</u></b>			
Component Type	Cit.	Cit.	Cit.
Component Percent	0.5	0.5	0.5
Permeability, ml/cm <sup>2</sup> x min.	23	25	73
<b><u>Filter</u></b>			
Type	CA	CA	CA
RTD, mm of H <sub>2</sub> O	107	75	83
Length, mm	31.3	30.8	29.7
Weight, g	0.18	0.17	0.17
Tipping Paper			
Length, mm	36.0	35.0	36.0
Tipping Paper Color	Cork	White	Cork
Ventilation, %	24	30	33
<b><u>Filler</u></b>			
Total alkaloids, % (DWB)	2.00	1.92	1.87
Total red. sugars, % (DWB)	5.8	5.5	7.1
Reconstituted Tob., %	20	32	15
Expanded Stems, %	10	None	5
Expanded Tob., %	None	21	23
Wt. of Tob., g (12.5% OV)	0.740	0.728	0.737
Rod Length, mm	68.0	68.1	69.2
Rod Density, g/cc	0.221	0.218	0.218

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

# 100 MM DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

<u>Style Lights (Box)</u>	<u>Style Lights</u>	<u>Doral Lights</u>	<u>Cambride Lights</u>
0.08	0.17	2.02	1.19
11.2	11.2	11.4	11.6
0.91	0.93	0.98	0.86
8.9	8.8	9.9	9.6
54	74	49	58
12.6	12.7	10.5	12.3
146	150	90	125
7.2	7.2	7.7	7.6
99.0	99.1	98.9	99.6
24.9	25.0	24.8	24.9
Cit.	Cit.	Cit.	Cit.
1.8	2.0	0.6	0.5
30	31	25	29
CA	CA	CA	CA
101	97	77	104
26.9	26.9	30.9	31.3
0.16	0.17	0.17	0.18
34.0	34.0	35.0	36.0
White	White	Cork	Cork
22	21	38	24
2.20	2.19	1.98	1.87
5.9	5.8	6.4	5.7
22	22	32	20
None	None	None	10
12	12	15	None
0.844	0.844	0.791	0.743
72.1	72.2	68.1	68.3
0.238	0.235	0.236	0.221

## <sup>1</sup>Sales

## Smoke

FTC Tar, mg/cigt.  
Nicotine, mg/cigt.  
Puffs/cigt.  
Filtration Eff., %  
CO, mg/cigt.

## Cigarette

Total RTD, mm of H<sub>2</sub>O  
Static Burn. Time, min.  
Length, mm  
Circumference, mm

## Paper

Component Type  
Citrate  
Permeability, ml/cm<sup>2</sup> x min.

## Filter

Type  
RTD, mm of H<sub>2</sub>O  
Length, mm  
Weight, g  
Tipping Paper  
Length, mm  
Tipping Paper Color  
Ventilation, %

## Filler

Total alkaloids, % (DWB)  
Total red. sugars, % (DWB)  
Reconstituted Tob., %  
Expanded Stems, %  
Expanded Tob., %  
Wt. of Tob., g (12.5% OV)  
Rod Length, mm  
Rod Density, g/cc

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100 MM DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Raleigh Extra Lights</u>	<u>Montclair Lights</u>	<u>Viceroy Lights</u>	<u>Misty Slims Full Flavor (Box)</u>
<sup>1</sup> Sales	0.37	0.65	0.34	0.27
<b><u>Smoke</u></b>				
FTC Tar, mg/cigt.	12.2	12.2	12.5	14.3
Nicotine, mg/cigt.	0.88	0.97	0.96	1.09
Puffs/cigt.	8.7	10.1	9.3	9.1
Filtration Eff., %	54	51	56	41
CO, mg/cigt.	12.9	11.1	14.0	15.1
<b><u>Cigarette</u></b>				
Total RTD, mm of H <sub>2</sub> O	115	125	133	132
Static Burn. Time, min.	6.8	7.7	7.6	7.5
Length, mm	99.0	99.7	98.8	98.8
Circumference, mm	24.8	24.5	24.8	23.0
<b><u>Paper</u></b>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.6	0.8	0.9	0.7
Permeability, ml/cm <sup>2</sup> x min.	44	26	43	20
<b><u>Filter</u></b>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	92	93	98	73
Length, mm	30.0	30.6	29.8	31.7
Weight, g	0.17	0.19	0.17	0.16
Tipping Paper				
Length, mm	36.0	36.0	36.0	36.0
Tipping Paper Color	Cork	White	Cork	White
Ventilation, %	22	28	19	15
<b><u>Filler</u></b>				
Total alkaloids, % (DWB)	1.73	1.91	1.86	1.87
Total red. sugars, % (DWB)	6.2	8.0	6.7	8.0
Reconstituted Tob., %	22	22	16	22
Expanded Stems, %	3	None	5	None
Expanded Tob., %	4	15	None	15
Wt. of Tob., g (12.5% OV)	0.796	0.782	0.847	0.692
Rod Length, mm	69.1	69.1	69.0	67.1
Rod Density, g/cc	0.235	0.238	0.250	0.246

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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100 MM DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

<u>Doral</u> <u>Full Flavor</u>	<u>Sterling</u>	<u>Raleigh</u> <u>Extra</u>	<u>Bristol</u> <u>Full Flavor</u>
1.51	0.32	0.46	0.58
15.0	15.1	15.8	15.8
1.18	1.09	1.04	1.10
9.6	8.4	8.3	9.0
52	50	50	51
16.7	17.9	14.7	16.7
118	133	119	112
8.1	7.8	6.7	7.1
99.0	98.9	99.0	99.3
24.8	24.8	24.9	24.9
Cit.	Phosphorus	Cit.	Cit.
0.4	0.2	0.6	0.5
24	26	41	23
CA	CA	CA	CA
77	71	72	75
30.7	30.8	29.6	31.3
0.17	0.17	0.16	0.17
35.0	35.0	35.0	36.0
Cork	White	Cork	Cork
14	None	None	None
1.97	1.90	1.68	1.97
6.4	5.7	7.3	5.9
32	32	22	20
None	None	3	10
15	21	4	None
0.809	0.730	0.781	0.734
68.2	68.1	69.4	68.0
0.243	0.219	0.229	0.218

<sup>1</sup>**Sales****Smoke**

FTC Tar, mg/cigt.  
 Nicotine, mg/cigt.  
 Puffs/cigt.  
 Filtration Eff., %  
 CO, mg/cigt.

**Cigarette**

Total RTD, mm of H<sub>2</sub>O  
 Static Burn. Time, min.  
 Length, mm  
 Circumference, mm

**Paper**

Component Type  
 Component Percent  
 Permeability, ml/cm<sup>2</sup> x min.

**Filter**

Type  
 RTD, mm of H<sub>2</sub>O  
 Length, mm  
 Weight, g  
 Tipping Paper  
 Length, mm  
 Tipping Paper Color  
 Ventilation, %

**Filler**

Total alkaloids, % (DWB)  
 Total red. sugars, % (DWB)  
 Reconstituted Tob., %  
 Expanded Stems, %  
 Expanded Tob., %  
 Wt. of Tob., g (12.5% OV)  
 Rod Length, mm  
 Rod Density, g/cc

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100 MM DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Pyramid</u> <u>Full Flavor</u>	<u>Montclair</u>	<u>Cambridge</u> <u>Full Flavor</u>	<u>Viceroy</u>
<sup>1</sup> Sales	0.24	0.69	0.82	0.66
<b><u>Smoke</u></b>				
FTC Tar, mg/cigt.	15.8	15.9	16.2	17.4
Nicotine, mg/cigt.	1.35	1.18	1.16	1.34
Puffs/cigt.	10.8	9.4	9.1	10.2
Filtration Eff., %	45	43	50	51
CO, mg/cigt.	14.1	15.1	17.0	15.4
<b><u>Cigarette</u></b>				
Total RTD, mm of H <sub>2</sub> O	111	126	123	116
Static Burn. Time, min.	9.2	7.3	7.2	8.0
Length, mm	98.8	99.7	99.6	99.0
Circumference, mm	24.7	24.5	24.9	24.8
<b><u>Paper</u></b>				
Component Type	*	Cit.	Cit.	Cit.
Component Percent	-	0.8	0.5	0.5
Permeability, ml/cm <sup>2</sup> x min.	232**	28	27	24
<b><u>Filter</u></b>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	63	64	75	77
Length, mm	29.7	30.0	31.2	26.6
Weight, g	0.17	0.17	0.17	0.15
Tipping Paper				
Length, mm	35.0	35.0	36.0	32.0
Tipping Paper Color	Cork	Cork	Cork	Cork
Ventilation, %	None	8	None	15
<b><u>Filler</u></b>				
Total alkaloids, % (DWB)	1.90	1.88	1.86	1.91
Total red. sugars, % (DWB)	6.8	7.4	5.9	5.7
Reconstituted Tob., %	15	22	20	15
Expanded Stems, %	5	None	10	7
Expanded Tob., %	23	15	None	11
Wt. of Tob., g (12.5% OV)	0.724	0.776	0.750	0.844
Rod Length, mm	69.1	69.8	68.3	72.4
Rod Density, g/cc	0.216	0.233	0.222	0.237

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

\*None detected.

\*\*These cigarette papers are perforated.

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2050250470

# 100 MM MENTHOL DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Sterling Ultra Lights</u>	<u>Misty Lights Slims (Box)</u>	<u>Raleigh Extra Lights</u>	<u>Sterling Lights</u>
<sup>1</sup> Sales	0.09	0.78	0.13	0.30
<b><u>Smoke</u></b>				
FTC Tar, mg/cigt.	4.8	8.9	9.4	9.5
Nicotine, mg/cigt.	0.47	0.78	0.78	0.79
Puffs/cigt.	9.8	9.5	8.6	9.8
Filtration Eff., %	136	50	49	50
CO, mg/cigt.	5.8	7.8	8.9	9.6
<b><u>Cigarette</u></b>				
Total RTD, mm of H <sub>2</sub> O	104	120	99	90
Static Burn. Time, min.	7.0	7.3	6.5	7.1
Length, mm	98.9	98.7	98.9	99.1
Circumference, mm	24.9	23.1	24.9	24.8
<b><u>Paper</u></b>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.5	0.9	0.6	0.5
Permeability, ml/cm <sup>2</sup> x min.	27	48	49	25
<b><u>Filter</u></b>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	131	103	80	75
Length, mm	30.9	31.8	29.6	30.8
Weight, g	0.19	0.18	0.17	0.17
Tipping Paper				
Length, mm	35.0	36.0	36.0	35.0
Tipping Paper Color	White	White	White	White
Ventilation, %	59	39	36	39
<b><u>Filler</u></b>				
Total alkaloids, % (DWB)	1.98	1.89	1.93	1.91
Total red. sugars, % (DWB)	5.3	7.0	5.8	5.4
Reconstituted Tob., %	32	22	16	32
Expanded Stems, %	None	None	12	None
Expanded Tob., %	21	15	14	21
Wt. of Tob., g (12.5% OV)	0.721	0.662	0.738	0.730
Rod Length, mm	68.0	66.8	69.2	68.3
Rod Density, g/cc	0.215	0.233	0.217	0.218
<b><u>Menthol, mg/cigt.</u></b>				
Smoke	0.28	0.49	0.41	0.44
Filler	2.7	3.0	2.7	2.6
Filter	2.7	2.4	1.5	2.0

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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100 MM MENTHOL DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Alpine Lights</u>	<u>Doral Lights</u>	<u>Bristol Lights</u>	<u>Style Lights (Box)</u>
<sup>1</sup> Sales	0.39	1.15	0.38	0.08
<b><u>Smoke</u></b>				
FTC Tar, mg/cigt.	9.7	10.0	10.6	10.9
Nicotine, mg/cigt.	0.77	0.85	0.95	0.87
Puffs/cigt.	9.4	10.2	9.1	9.1
Filtration Eff., %	54	61	57	56
CO, mg/cigt.	10.0	12.6	11.8	12.5
<b><u>Cigarette</u></b>				
Total RTD, mm of H <sub>2</sub> O	106	117	111	143
Static Burn. Time, min.	7.6	7.8	7.4	7.2
Length, mm	99.5	99.0	99.3	99.1
Circumference, mm	24.9	24.9	24.9	24.8
<b><u>Paper</u></b>				
Component Type	Cit.	Cit.	Cit.	Cit.
Component Percent	0.5	0.5	0.5	2.2
Permeability, ml/cm <sup>2</sup> x min.	43	24	22	31
<b><u>Filter</u></b>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	94	109	105	100
Length, mm	31.3	30.8	31.3	26.8
Weight, g	0.19	0.19	0.18	0.17
Tipping Paper				
Length, mm	36.0	35.0	36.0	34.0
Tipping Paper Color	White	Cork	White	White
Ventilation, %	35	36	27	24
<b><u>Filler</u></b>				
Total alkaloids, % (DWB)	1.96	1.98	2.25	2.21
Total red. sugars, % (DWB)	8.0	6.7	5.7	7.8
Reconstituted Tob., %	22	32	20	22
Expanded Stems, %	5	None	10	None
Expanded Tob., %	15	15	None	12
Wt. of Tob., g (12.5% OV)	0.772	0.809	0.725	0.832
Rod Length, mm	68.2	68.2	68.0	72.2
Rod Density, g/cc	0.230	0.240	0.216	0.236
<b><u>Menthol, mg/cigt.</u></b>				
Smoke	0.49	0.50	0.46	0.47
Filler	2.9	3.2	2.2	2.9
Filter	2.2	1.9	1.9	1.3

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

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# 100 MM MENTHOL DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

<u>Pyramid Lights</u>	<u>Cambridge Lights</u>	<u>Montclair Lights</u>	<u>Misty Slims Full Flavor (Box)</u>
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0.20	0.69	0.45	0.28
------	------	------	------

<sup>1</sup>Sales**Smoke**

11.0	11.2	11.6	14.6
0.96	0.83	0.97	1.13
9.9	9.8	10.1	9.4
50	59	52	43
10.9	12.5	11.6	14.9

FTC Tar, mg/cigt.  
Nicotine, mg/cigt.  
Puffs/cigt.  
Filtration Eff., %  
CO, mg/cigt.

**Cigarette**

109	115	122	130
7.8	7.8	7.6	7.8
98.9	99.4	99.9	98.8
24.7	24.9	24.4	23.1

Total RTD, mm of H<sub>2</sub>O  
Static Burn. Time, min.  
Length, mm  
Circumference, mm

**Paper**

Cit.	Cit.	Cit.	Cit.
0.5	0.5	0.8	0.7
71	28	28	19

Component Type  
Component Percent  
Permeability, ml/cm<sup>2</sup> x min.

**Filter**

CA	CA	CA	CA
81	109	93	71
29.7	31.5	30.6	31.5
0.17	0.18	0.19	0.16
35.0	36.0	35.0	36.0
White	White	White	White
34	28	32	15

Type  
RTD, mm of H<sub>2</sub>O  
Length, mm  
Weight, g  
Tipping Paper  
Length, mm  
Tipping Paper Color  
Ventilation, %

**Filler**

1.96	1.87	1.93	1.86
7.3	6.2	7.7	7.6
15	20	22	22
5	10	None	None
23	None	15	15
0.730	0.774	0.794	0.669
69.2	68.0	69.3	67.2
0.217	0.232	0.241	0.234

Total alkaloids, % (DWB)  
Total red. sugars, % (DWB)  
Reconstituted Tob., %  
Expanded Stems, %  
Expanded Tob., %  
Wt. of Tob., g (12.5% OV)  
Rod Length, mm  
Rod Density, g/cc

**Menthol, mg/cigt.**

0.39	0.55	0.60	0.53
1.9	2.9	3.2	2.0
1.5	2.0	2.5	1.8

Smoke  
Filler  
Filter

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100 MM MENTHOL DISCOUNT CIGARETTES

(Brands Ranked by FTC Tar, left to right)

	<u>Alpine</u>	<u>Doral Full Flavor</u>	<u>Sterling</u>	<u>Pyramid Full Flavor</u>
<sup>1</sup> Sales	0.30	0.52	0.28	0.07
<b><u>Smoke</u></b>				
FTC Tar, mg/cigt.	15.1	15.1	15.6	16.1
Nicotine, mg/cigt.	1.06	1.18	1.12	1.37
Puffs/cigt.	9.2	9.7	8.4	10.7
Filtration Eff., %	44	50	51	45
CO, mg/cigt.	13.6	16.1	18.5	14.0
<b><u>Cigarette</u></b>				
Total RTD, mm of H <sub>2</sub> O	108	120	128	116
Static Burn. Time, min.	7.2	7.9	7.9	9.4
Length, mm	99.5	99.0	98.8	98.8
Circumference, mm	24.9	24.8	24.9	24.7
<b><u>Paper</u></b>				
Component Type	Cit.	Cit.	Phosphorus	Phosphorus
Citrate	1.8	0.4	0.2	0.2
Permeability, ml/cm <sup>2</sup> x min.	47	25	25	203*
<b><u>Filter</u></b>				
Type	CA	CA	CA	CA
RTD, mm of H <sub>2</sub> O	59	78	76	67
Length, mm	27.6	30.8	30.8	29.7
Weight, g	0.17	0.17	0.17	0.17
Tipping Paper				
Length, mm	32.0	35.0	35.0	35.0
Tipping Paper Color	White	Cork	White	White
Ventilation, %	11	14	None	None
<b><u>Filler</u></b>				
Total alkaloids, % (DWB)	2.01	1.97	1.89	1.88
Total red. sugars, % (DWB)	7.6	6.5	5.6	7.6
Reconstituted Tob., %	22	32	32	15
Expanded Stems, %	5	None	None	5
Expanded Tob., %	15	15	21	23
Wt. of Tob., g (12.5% OV)	0.803	0.813	0.724	0.719
Rod Length, mm	71.8	68.2	68.0	69.1
Rod Density, g/cc	0.228	0.243	0.216	0.214
<b><u>Menthol, mg/cigt.</u></b>				
Smoke	0.60	0.41	0.49	0.44
Filler	2.4	1.9	1.9	1.5
Filter	1.5	1.2	1.3	1.2

<sup>1</sup>Second quarter sales in billions of cigarettes - Philip Morris Product Evaluation Division.

\*These cigarette papers are perforated.

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## COUPON BRANDS

Two companies utilize coupons on their brands:

### BROWN & WILLIAMSON

Belair (85 & 100)  
Raleigh Filter (85 & 100)  
Raleigh Nonfilter (85)  
Raleigh Lights (85 & 100)

### LIGGETT GROUP

Chesterfield Nonfilter (70 & 85)

BLEND

2050250475

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BLEND COMPONENTS (PERCENT BY WEIGHT)

	<u>Reconstituted Tobacco</u>	<u>Expanded Stems</u>	<u>Expanded Tobacco<sup>1</sup></u>
<b>PHILIP MORRIS</b>			
Alpine KS,100			
Alpine Lights KS,100	22	5	15
Bucks KS			
Bucks Lights KS			
B & H 100 (Plain & Menthol) (SP & Box)			
B & H Lights 100 (Plain & Menthol)			
B & H Multifilter KS (Plain)			
Marlboro 80,KS,100			
Marlboro Lights KS (SP & Box), 100 (SP & Box)	22	3	12
Marlboro Medium KS (SP & Box)			
Merit KS,100 (Plain & Menthol)			
Parliament Lights 80,KS,100			
Saratoga 120 (Plain & Menthol)			
Virginia Slims 100 (Plain & Menthol)			
Virginia Slims Lights 100 (Plain & Menthol)			
Virginia Slims Lights 120 (Plain & Menthol)			
Merit Ultra Lights KS,100 (Box)	22	None	21
Marlboro Menthol KS			
Marlboro Lights Menthol KS (Box)	22	None	15
B & H DeLuxe Ultra Lights 100 (Plain & Menthol)			
Virginia Slims Ultra Lights 100 (Plain & Menthol)	22	3	19
Cambridge Lights KS,100 (Plain & Menthol)			
Cambridge Full Flavor KS,100			
Cambridge Ultra Low Tar 100	20	10	None
Bristol Lights KS, 100 (Plain & Menthol)			
Bristol Full Flavor KS,100			
Bristol Ultra Lights 100			
Cambridge Lowest KS, 100	11	None	43
Commander KS (NF)			
Bristol KS (NF)	18	3	13
Virginia Slims SuperSlims 100 (Plain & Menthol)	18	None	None

<sup>1</sup>The expanded tobacco level represents any expanded component (lamina plus expanded stems) that floats by the acetone method.

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BLEND COMPONENTS (PERCENT BY WEIGHT)

	<u>Reconstituted Tobacco</u>	<u>Expanded Stems</u>	<u>Expanded Tobacco<sup>1</sup></u>
<b>R. J. REYNOLDS</b>			
Salem Ultra Lights KS	25	None	25
Camel Lights Wides LS (Box)			
Doral Full Flavor KS,100			
Doral Lights KS,100			
Doral Ultra Lights KS,100	32	None	15
Doral Full Flavor Menthol KS,100			
Doral Lights Menthol KS,100			
Camel Ultra Lights KS			
Camel Ultra Lights KS (Box)			
Camel Ultra Lights 100 (Box)			
Salem Lights 100 (Box)			
Salem Slim Lights 100 (Box)	25	None	15
Vantage Ultra Lights KS,100			
Winston Ultra Lights KS,100			
Magna KS,KS (Box)			
Magna Lites KS,KS (Box)	32	None	21
Sterling KS,100 (Plain & Menthol)			
Sterling Ultra Lights 100 (Plain & Menthol)			
Sterling Lights KS,100 (Plain & Menthol)			
Camel KS,KS (Box)			
Camel Lights KS,KS (Box)			
More 120 (Plain & Menthol)			
More Lights 100 (Plain & Menthol)			
More White Lights 120 (Plain & Menthol)	25	None	12
Salem Lights KS			
Salem KS,100			
Salem Ultra Lights 100			
Vantage KS,100 (Plain & Menthol)			
Winston Lights KS			
Winston KS (Box), 100			
Camel Lights 100			
Salem Lights 100	25	None	7
Winston KS (SP)			
Winston Lights KS (Box), 100, 100 (Box)			
Winston Select KS,KS (Box)			
Now KS, 100 (Plain & Menthol)	15	None	51
Camel 70 (NF)	15	None	12

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BLEND COMPONENTS (PERCENT BY WEIGHT)

	<u>Reconstituted Tobacco</u>	<u>Expanded Stems</u>	<u>Expanded Tobacco<sup>1</sup></u>
<b>BROWN &amp; WILLIAMSON</b>			
Raleigh Extra Lights KS (Plain & Menthol),100 Raleigh Extra KS,100	22	3	4
Capri 100	19	None	None
Raleigh Extra Lights Menthol 100	16	12	14
Raleigh Extra KS (NF) Raleigh Extra Ultra Lights KS,100 Viceroy Lights KS (Box),100	16	5	None
Barclay KS Viceroy KS,100	15	7	11
Belair KS,100 Kool Milds KS Kool 80,KS,100	13	10	11

**LORILLARD**

Kent KS,100 Newport 80 (Box),KS,100 Newport Lights KS,100 Style Lights 100 Style Lights 100 (Box) (Plain & Menthol)	22	None	12
True KS	20	None	14

<sup>1</sup>The expanded tobacco level represents any expanded component (lamina plus expanded stems) that floats by the acetone method.

BLEND COMPONENTS (PERCENT BY WEIGHT)

	<u>Reconstituted Tobacco</u>	<u>Expanded Stems</u>	<u>Expanded Tobacco<sup>1</sup></u>
<b>AMERICAN</b>			
Montclair Ultra Lights 100	24	None	24
Bull Durham Lights KS (Box)			
Bull Durham KS (Box)			
Montclair KS,100	22	None	15
Montclair Lights KS (Plain & Menthol)			
Montclair Lights 100 (Plain & Menthol)			
Misty Slims Full Flavor 100 (Box) (Plain & Menthol)			
Misty Lights Slims 100 Box (Plain & Menthol)			
Pall Mall 100			
Tareyton KS			
Carlton KS,100 (Plain & Menthol)	20	None	46
Carlton 120 (Plain & Menthol)	20	None	34
Lucky Strike 70 (NF)	20	None	11
Pall Mall KS (NF)			

**LIGGETT**

Lark Lights KS,100			
L & M KS, 100			
Pyramid Full Flavor KS, 100 (Plain & Menthol)	15	5	23
Pyramid Lights KS			
Pyramid Lights 100 (Plain & Menthol)			
Pyramid Ultra Lights 100			
Chesterfield KS (NF)	10	5	19
Pyramid KS (NF)			

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MINOR BRANDS

	Cigt. Length, mm	FTC Tar, mg/cigt.	Nicotine, mg/cigt.	Puffs/cigt.	CO, mg/cigt.
<b><u>REGULAR NONFILTER</u></b>					
Chesterfield	69.2	16.5	1.07	6.8	9.4
COMMANDER	69.9	19.9	1.34	7.3	10.8
PLAYERS NAVY CUT (BOX)	70.4	22.5	1.64	8.5	12.6
<b><u>KING SIZE NONFILTER</u></b>					
Pyramid (NF)	84.2	19.8	1.44	9.1	11.2
Raleigh	84.0	21.8	1.31	8.3	13.2
ENGLISH OVALS (BOX)	84.4	22.6	1.85	10.5	13.1
Herbert Tareyton	83.1	23.3	1.60	9.0	15.9
Old Gold Straights	84.1	23.5	1.75	8.9	14.2
Raleigh Extra (NF)	84.3	24.3	1.56	9.2	14.0
<b><u>LONG SIZE FILTER - PLAIN</u></b>					
Kent Golden Lights (Box)	80.1	7.8	0.69	6.8	9.1
Kent (Box)	80.0	11.9	0.87	7.8	12.3
<b><u>KING SIZE FILTER - PLAIN</u></b>					
Now (Box)	83.1	0.1	0.00	7.1	0.3
Ultra Carlton (Box)	83.0	0.2	0.00	6.7	0.3
Barclay (Box)	83.2	2.4	0.22	9.3	2.6
Triumph	83.9	3.6	0.36	7.2	3.7
Kent III Ultra Lights	84.2	3.8	0.41	7.6	3.9
MERIT ULTRA LIGHTS	84.1	4.6	0.46	8.3	5.1
MERIT (BOX)	83.1	8.0	0.64	7.9	9.2
Lucky Strike Lights	82.9	8.0	0.66	8.3	9.1
Old Gold Lights	83.8	8.1	0.73	6.9	9.5
Kent Golden Lights	84.0	8.2	0.71	7.2	8.9
Century Lights 25's	83.1	8.5	0.72	9.2	9.5
PLAYERS LIGHTS 25'S	84.0	9.9	0.76	8.4	10.3
MARLBORO LIGHTS 25'S	84.1	10.4	0.80	8.5	11.1
American Lights	83.3	11.4	0.93	8.2	11.7
Richland Lights 25's	84.2	11.5	0.89	8.1	11.4
Raleigh Lights	84.3	11.6	0.86	8.2	12.1
PLAYERS (BOX)	83.1	11.6	0.88	8.2	12.0
Viceroy Lights	84.0	11.7	0.92	8.3	11.3
L&M (Box)	84.0	12.2	0.93	7.4	10.8
Lucky Strike Low Tar	83.1	13.3	1.03	8.2	13.6
Lucky Strike Low Tar (Box)	82.9	13.6	1.05	8.4	13.7
B&H (BOX) - PRINCESS PACK	83.8	14.2	1.21	8.9	11.2
Raleigh	84.1	14.4	0.93	7.5	13.4
Century 25's	83.1	15.2	1.12	7.3	15.0
Old Gold	84.1	15.2	1.19	8.0	16.0
MARLBORO 25'S	84.2	15.4	1.10	9.2	14.4
Pall Mall	84.9	15.5	1.19	9.4	12.9
Viceroy (Box)	83.5	15.7	1.11	8.4	13.4
Richland 25's	84.0	17.1	1.25	8.8	13.9
American Full Flavor	84.9	17.1	1.30	9.3	14.7

<sup>1</sup>Filter Type: CA = Cellulose Acetate, C = Carbon

MINOR BRANDS

Total RTD, mm of H <sub>2</sub> O	Ventilation, %	Circum- ference, mm	Permeability, ml/cm <sup>2</sup> x min.	Color	Tipping Paper Length, mm	Filter Length, mm	Filter Type <sup>1</sup>
74	-	25.0	46	-	-	-	-
54	-	25.0	38	-	-	-	-
93	-	25.0	28	-	-	-	-
81	-	25.0	48	-	-	-	-
70	-	24.8	24	-	-	-	-
99	-	25.4	43	-	-	-	-
88	-	25.1	26	-	-	-	-
78	-	24.9	19	-	-	-	-
60	-	24.8	42	-	-	-	-
131	30	25.0	27	White	30.0	24.9	CA
133	17	24.9	36	White	25.0	20.9	CA
107	95	24.7	35	White	31.0	26.9	CA
113	98	25.0	124*	White	36.0	31.9	CA
52	82	24.8	24	Cork	32.0	27.0	CA
104	61	24.8	30	Cork	32.0	24.9	CA/CA
110	58	24.9	30	White	32.0	24.8	CA/CA
106	54	24.8	45	Cork	32.0	26.9	CA
122	31	24.9	44	Cork	32.0	26.7	CA
128	33	25.0	44	Cork	30.0	25.0	CA
132	33	25.0	35	Cork	32.0	24.9	CA
126	31	24.9	30	White	32.0	24.8	CA
120	43	24.2	24	Cork	27.0	23.1	CA
114	24	24.9	51	White	31.0	27.0	CA
115	26	25.0	45	White	31.0	26.9	CA
118	23	24.9	26	White	30.0	24.9	CA
132	17	24.8	33	White	32.0	26.8	CA
132	19	25.0	28	Cork	32.0	27.0	CA
108	22	25.0	22	Cork	32.0	27.0	CA
131	22	24.8	30	Cork	32.0	26.8	CA
120	None	24.7	165*	White	30.0	24.8	CA
118	13	24.9	26	Cork	30.0	24.7	CA
123	12	25.0	25	Cork	30.0	24.9	CA
111	15	24.8	31	White	30.0	25.1	CA
111	None	24.9	41	Cork	26.0	21.1	CA
123	14	24.1	25	Cork	27.0	22.9	CA
139	None	24.8	20	Cork	26.0	20.7	CA
107	12	24.9	45	Cork	25.0	20.9	CA
110	16	24.9	52	Cork	24.0	19.9	CA
121	6	24.9	22	Cork	26.0	20.9	CA
118	8	24.8	25	Cork	26.0	21.1	CA
106	11	24.9	47	Cork	24.0	20.0	CA

\*These cigarette papers are perforated.

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MINOR BRANDS

	Cigt. Length mm	FTC Tar, mg/cigt.	Nicotine, mg/cigt.	Puffs/cigt.	CO, mg/cigt.
<b><u>100 MM FILTER - PLAIN</u></b>					
Barclay	98.7	4.7	0.43	11.5	3.2
Triumph	98.6	4.8	0.45	8.6	6.0
Kent III Ultra Lights (Box)	98.9	4.9	0.46	8.6	6.9
Kent III Ultra Lights	98.8	4.9	0.51	9.4	5.9
<b>MERIT ULTRA LIGHTS</b>	99.6	5.4	0.52	10.1	6.5
Eve Ultra Lights (Box)	97.8	5.6	0.56	9.3	4.1
Malibu Ultra Lights	99.9	6.2	0.57	9.1	8.6
True	99.2	7.0	0.64	9.3	6.4
L&M Long Lights	98.7	8.2	0.77	9.8	6.5
Kent Golden Lights (Box)	98.9	8.9	0.79	9.1	9.0
Pall Mall Lights	99.6	9.5	0.82	9.5	10.7
Kent Golden Lights	99.3	9.5	0.84	9.4	10.0
<b>B &amp; H LIGHTS (BOX)</b>	98.5	10.6	0.83	9.0	10.8
Malibu Lights	99.8	10.6	0.88	10.1	10.1
Lucky Strike Lights	99.6	10.8	0.93	11.0	10.7
Century Lights 25's	97.9	11.2	0.94	9.7	12.3
Silva Thins (Box)	98.5	11.3	0.96	9.5	11.1
<b>PLAYERS LIGHTS 25'S</b>	99.4	11.4	0.88	10.0	12.9
Newport Stripes (Box)	99.2	11.4	0.97	9.0	13.4
Satin	98.6	11.5	0.98	8.9	12.4
American Lights	99.8	12.3	1.01	10.2	11.9
Richland Lights 25's	99.0	12.5	0.93	9.4	14.6
Raleigh Lights	99.0	12.7	0.95	9.6	13.6
<b>PLAYERS (BOX)</b>	98.6	13.4	1.02	9.2	12.0
Lucky Strike Low Tar	99.8	13.9	1.19	10.4	12.0
<b>MARLBORO (BOX)</b>	98.3	14.0	1.06	9.0	15.0
American Full Flavor	99.8	14.4	1.06	9.1	16.1
Century 25's	97.8	15.1	1.15	9.4	16.1
Raleigh	99.0	15.2	0.98	8.3	15.7
Malibu	99.8	15.5	1.20	9.1	14.5
Pall Mall (Red)	99.7	16.7	1.31	10.1	15.8
Richland 25's	98.8	17.2	1.27	10.4	16.1
Old Gold	98.6	18.0	1.39	8.7	17.4
<b><u>120 MM FILTER PLAIN</u></b>					
Eve Ultra Lights (Box)	119.8	5.9	0.57	10.8	10.0
Eve Lights (Box)	119.8	12.5	1.04	12.8	11.2
Max	119.6	15.3	1.25	10.1	15.1
Tall	119.5	17.8	1.51	14.7	17.3
<b><u>FILTER CHARCOAL</u></b>					
Tareyton Lights King Size	84.9	5.8	0.50	7.6	6.9
Tareyton Lights 100	99.9	8.7	0.74	10.8	9.2
<b>B &amp; H MULTIFILTER KING SIZE</b>	83.9	11.2	0.88	8.4	9.5
Tareyton 100	99.9	13.5	1.04	9.6	16.6

<sup>1</sup>Filter Type: CA = Cellulose Acetate, C = Carbon, PL = Plastic

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# MINOR BRANDS

Total RTD, mm of H <sub>2</sub> O	Ventilation, %	Circum- ference, mm	Permeability, ml/cm <sup>2</sup> x min.	Color	Tipping Paper Length, mm	Filter Length, mm	Filter Type <sup>1</sup>
59	77	24.8	24	Cork	36.0	27.0	CA
120	53	24.9	31	Cork	34.0	26.9	CA/CA
126	52	24.8	28	White	34.0	26.8	CA/CA
125	55	24.9	29	White	34.0	26.8	CA/CA
112	54	25.0	26	Cork	36.0	31.1	CA
77	64	22.6	45	White	36.0	29.9	CA
121	44	24.5	27	White	35.0	30.7	CA
71	56	24.8	32	White	34.0	26.8	CA/PL
86	56	24.7	30	White	35.0	29.8	CA
102	42	25.0	27	White	34.0	26.8	CA
136	28	24.5	49	White	36.0	26.7	CA
110	42	24.9	31	White	34.0	26.8	CA
121	27	24.1	45	White	36.0	31.4	CA
124	32	24.5	25	White	35.0	30.8	CA
126	33	24.5	26	Cork	32.0	31.0	CA
104	37	24.1	24	Cork	35.0	30.9	CA
125	28	23.1	27	White	36.0	32.0	CA
119	29	24.9	26	White	36.0	31.5	CA
143	22	24.9	31	White	34.0	26.8	CA
117	26	24.9	31	White	34.0	26.8	CA
122	27	24.5	27	White	35.0	30.8	CA
140	16	24.9	43	White	36.0	27.0	CA
138	16	25.0	42	Cork	36.0	30.0	CA
108	20	24.2	46	Cork	36.0	31.4	CA
105	26	24.4	51	Cork	32.0	26.7	CA
117	12	25.0	49	Cork	32.0	27.3	CA
118	9	24.5	25	Cork	35.0	30.6	CA
129	13	24.1	25	Cork	35.0	30.9	CA
116	None	24.9	39	Cork	32.0	26.8	CA
116	11	24.5	28	Cork	35.0	30.7	CA
129	8	24.5	26	Cork	32.0	26.8	CA
130	12	24.8	24	Cork	32.0	26.9	CA
123	None	25.1	18	Cork	34.0	26.8	CA
87	67	21.0	49	White	35.0	29.8	CA
109	55	21.1	12	White	35.0	29.7	CA
133	24	21.8	19	White	35.0	29.8	CA
137	35	22.3	14	White	35.0	29.8	CA
92	46	25.1	51	Cork	32.0	26.9	C on Paper/CA
112	44	24.8	48	Cork	32.0	26.4	C on Paper/CA
101	24	24.7	33	White	31.0	26.7	C on CA/CA
147	None	24.8	51	Cork	32.0	26.7	C on Paper/CA

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MINOR BRANDS

	Cigt. Length mm	FTC Tar, mg/cigt.	Nicotine, mg/cigt.	CO, Puffs/cigt.	CO, mg/cigt.	Menthol mg/cigt.
<b><u>NONFILTER MENTHOL</u></b>						
Kool Regular (NF)	70.1	19.9	1.28	6.6	12.5	0.62
<b><u>LONG SIZE &amp; KING SIZE FILTER MENTHOL</u></b>						
Newport Lights (Box)	80.2	8.3	0.69	6.9	9.7	0.29
Triumph	83.8	4.1	0.38	6.9	4.5	0.25
<b>MERIT ULTRA LIGHTS</b>	84.1	4.5	0.44	7.6	5.2	0.41
True	84.3	4.7	0.47	8.5	4.8	0.25
Kool Ultra	83.8	5.7	0.50	8.3	7.4	0.17
Kool Lights	84.0	8.3	0.68	7.5	8.2	0.32
Kent Golden Lights	84.1	8.3	0.70	7.1	9.8	0.30
<b>PLAYERS LIGHTS 25'S</b>	83.9	9.6	0.75	8.0	9.6	0.47
<b>PLAYERS (BOX)</b>	83.2	11.1	0.85	8.4	11.5	0.55
Kool Milds (Box)	83.6	11.5	0.88	8.1	10.6	0.48
Newport 25's	84.2	17.6	1.40	8.3	16.5	0.47
<b><u>100 MM FILTER MENTHOL</u></b>						
Carlton (Box)	98.7	1.3	0.15	9.2	1.1	0.22
Carlton	99.3	2.5	0.26	8.9	2.5	0.29
Triumph	98.5	5.1	0.45	8.4	6.7	0.32
<b>MERIT ULTRA LIGHTS</b>	99.5	5.3	0.52	10.4	6.9	0.45
True	99.1	6.6	0.63	9.6	7.1	0.31
Kool Ultra	98.9	6.7	0.60	9.4	8.5	0.28
Kool Lights	99.0	8.1	0.67	9.3	8.6	0.33
Newport Lights (Box)	99.2	9.0	0.81	9.4	9.3	0.33
Capri (Box)	96.7	9.2	0.76	9.1	5.8	0.68
<b>MARLBORO LIGHTS (BOX)</b>	98.6	9.4	0.77	9.4	10.2	0.53
Kent Golden Lights	99.1	9.6	0.84	9.3	10.1	0.38
Belair	98.8	9.8	0.69	8.7	8.9	0.37
<b>B &amp; H LIGHTS (BOX)</b>	98.4	10.6	0.82	8.9	11.2	0.66
Silva Thins (Box)	98.5	11.4	0.96	9.7	10.6	0.41
<b>PLAYERS LIGHTS 25'S</b>	99.5	11.7	0.87	10.1	12.6	0.59
Kool Milds	98.9	11.8	0.92	8.5	11.6	0.41
Newport Stripes (Box)	99.4	11.9	0.94	9.0	13.1	0.46
Kent	98.5	12.5	0.97	9.4	11.7	0.35
Satin	98.5	12.7	1.16	8.9	11.9	0.41
<b>PLAYERS (BOX)</b>	98.4	13.5	1.02	9.0	11.6	0.68
Newport 25's	98.7	17.2	1.30	8.8	16.5	0.47
Newport (Box)	99.3	18.1	1.41	8.9	17.5	0.46
Spring	99.0	18.3	1.38	8.8	19.1	0.50
<b><u>120 MM FILTER MENTHOL</u></b>						
Eve Ultra Lights (Box)	119.7	6.1	0.60	10.8	3.1	0.38
Eve Lights (Box)	119.6	12.2	1.03	12.8	10.7	0.61
Max	119.7	15.2	1.27	10.4	15.7	0.49
Tall	119.5	16.0	1.43	14.9	14.8	0.63

<sup>1</sup>Filter Type: CA = Cellulose Acetate, C = Carbon, PL = Plastic

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MINOR BRANDS

Total RTD, mm of H <sub>2</sub> O	Ventilation, %	Circum- ference, mm	Permeability, ml/cm <sup>2</sup> x min.	Color	Tipping Paper Length, mm	Filter Length, mm	Filter Type <sup>1</sup>
67	-	24.9	24	Cork	11.0	-	-
135	19	25.0	29	Cork	30.0	24.9	CA
108	56	24.9	31	Cork	32.0	24.9	CA/CA
105	54	24.9	45	Cork	32.0	26.9	CA
66	62	24.8	38	White	30.0	24.8	CA/PL
41	71	24.9	46	Cork	32.0	26.9	CA
118	35	24.8	40	Cork	32.0	26.8	CA
138	30	24.9	30	White	32.0	24.9	CA
110	28	25.0	45	White	31.0	26.9	CA
99	26	24.9	22	Cork	32.0	27.0	CA
111	24	24.9	24	Cork	26.0	21.0	CA
114	None	24.9	19	Cork	25.0	21.0	CA
83	80	24.5	23	White	35.0	26.8	CA
92	72	24.4	22	White	32.0	30.6	CA
121	53	24.9	30	Cork	34.0	26.9	CA
110	56	25.0	25	Cork	36.0	31.4	CA
68	56	25.0	30	White	34.0	26.9	CA/PL
55	62	24.8	42	Cork	36.0	27.1	CA
115	40	24.9	23	Cork	36.0	30.1	CA
115	37	24.8	31	Cork	34.0	26.9	CA
159	49	17.2	25	White	32.0	26.9	CA
115	32	24.9	45	White	36.0	30.9	CA
126	36	24.9	29	White	34.0	26.9	CA
104	32	24.9	39	White	36.0	29.5	CA
119	29	24.1	43	White	36.0	31.5	CA
124	31	23.0	27	White	32.0	31.8	CA
120	28	24.9	28	White	36.0	31.4	CA
117	22	24.8	23	Cork	36.0	26.9	CA
149	18	24.8	29	White	34.0	26.8	CA
123	21	24.8	38	White	34.0	26.8	CA
122	14	24.9	29	White	34.0	26.8	CA
106	19	24.2	43	Cork	36.0	31.4	CA
127	None	24.9	20	Cork	34.0	26.9	CA
126	None	24.9	19	Cork	34.0	26.9	CA
133	None	24.9	18	Cork	34.0	26.9	CA
87	67	21.2	48	White	35.0	29.8	CA
115	53	21.1	12	White	35.0	29.9	CA
146	23	21.8	19	White	35.0	29.8	CA
127	38	22.3	14	White	35.0	29.9	CA

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## PLEASE NOTE

The Appendix Section which includes the summary of brand changes, the description of data reported, and experimental procedures has been updated in this report.

Please retain this copy for reference as these sections will not be included again until January, 1994. This will save a considerable amount of paper and effort by not including the Appendix Section in each report.

The summary of competitive brand changes is arranged alphabetically by company. Also, the brands are listed alphabetically for your convenience in locating a specific brand.

2050250486

## APPENDIX

### SUMMARY OF COMPETITIVE BRAND CHANGES OBSERVED SINCE APRIL, 1960

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#### AMERICAN BRANDS

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##### AMERICAN BRANDS LS (BOX) [American Brand 80 (Box)]

4/71 80 mm - Test marketed in box (80 mm) - No unusual characteristics.

Discontinued.

##### AMERICAN BRANDS KS [American Brand 85]

4/71 85 mm - Test marketed in soft pack (85 mm) - No unusual characteristics.

Discontinued

##### AMERICAN FILTERS KS [American Filters 85]

5/89 Test marketed in Illinois - This value entry brand delivers 16 mg tar and 1.1 mg nicotine - packaged in a red pack.

##### AMERICAN FILTERS 100

5/89 Test marketed in Illinois - This value entry brand delivers 16 mg tar and 1.1 mg nicotine - packaged in a red pack.

##### AMERICAN LIGHTS KS [American Lights 85]

9/88 Test marketed in St. Louis, Missouri. Delivers 12 mg tar and 0.9 mg nicotine. This is a value entry product.

##### AMERICAN LIGHTS 100

9/88 Test marketed in St. Louis, Missouri. Delivers 11 mg tar and 0.9 mg nicotine. This is a value entry product.

7/90 Lower tobacco weight (0.865 to 0.826 g) correlated with lower tar (12 to 11 mg) and nicotine (1.0 to 0.9 mg) deliveries and lower puff count (10.6 to 9.8). Lower rod density was observed (0.257 to 0.246 g/cc).

7/92 A longer filter (26.7 to 30.8 mm) resulting in longer tipping (32 to 35 mm), shorter rod length (73.1 to 69.0 mm) and lower tobacco weight (0.831 to 0.796 g). A less permeable cigarette paper (44 to 26 ml/cm<sup>2</sup> x min.). Smoke deliveries did not change.

##### AMERICAN LIGHTS 100 MENTHOL

11/89 Distributed in Virginia - Delivers 11 mg tar, 0.9 mg nicotine and 0.6 mg smoke menthol - branded generic.

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## AMERICAN BRANDS

**AMERICAN LIGHTS 120**

4/76 Plain - Introduced 120 mm cigarette with a 40 mm CA filter and a tipping paper length of 45 mm - Tar (8 mg) lower than any 120 mm entry to date.

Discontinued

**AMERICAN LIGHTS MENTHOL 120**

4/76 Menthol - Introduced 120 mm cigarette with a 40 mm CA filter and a tipping paper length of 45 mm - Tar (9 mg) lower than any 120 mm entry to date.

Discontinued

**AMERICAN LONGS 120**

9/75 Plain - Introduced 120 mm cigarette with a white cigarette paper - 30 mm CA filter - Tar (19 mg) and nicotine (1.5 mg) deliveries.

Discontinued

**AMERICAN LONGS MENTHOL 120**

9/75 Menthol - Introduced 120 mm cigarette with a white cigarette paper - 30 mm CA filter - Tar (16 mg) and nicotine (1.3 mg) deliveries.

Discontinued

**AMERICAN OVALS 100**

6/69 100 mm cigarette with 25 mm CA filter made like a normal cigarette and pressed into its oval shape.

Discontinued

**BERMUDA KS [Bermuda 85]**

5/65 Test marketed - king size - 20 mm CA filter, high TPM, low RTD.

Discontinued.

**BRIGHTON KS [Brighton 85]**

4/65 Test marketed - king size - dual filtered mentholated -similar to Montclair.

Discontinued.

**BRIGHTON CONVERTIBLE MENTHOL 100**

4/68 Same as Tennyson Menthol 100 - Introduced in test market.

Discontinued.

**BRIGHTON PINCH MENTHOL 100**

11/68 Similar to previously introduced Brighton Convertible Menthol 100 and Tennyson Menthol 100.

Discontinued.

**BULL DURHAM KS [Bull Durham 85]**

6/66 Introduced - king size with larger circumference than normal cigarettes - 20 mm CA filter.

Discontinued.

**BULL DURHAM KS (BOX)**

7/91 National distribution - 16 mg tar, 1.2 mg nicotine with a 25 mm CA filter, cork tipping paper and 6% ventilation; blend contains 22% reconstituted tobacco and 14% expanded tobacco.

**BULL DURHAM LIGHTS KS (BOX)**

7/91 National distribution - 10 mg tar, 0.8 mg nicotine with a 25 mm CA filter, cork tipping paper and 25% ventilation; blend contains 22% reconstituted tobacco and 14% expanded tobacco.

**CARLTON REGULAR [Carlton 70]**

5/69 70 mm cigarette with 25 mm CA filter - Tar (0.7 mg), nicotine (0.15 mg). Data noted on pack "Tar" = 3 mg - Nicotine = 0.3 mg.

1/76 Increased filter ventilation, a more porous cigarette paper and a smaller circumference lowered tar to 1 mg and nicotine to 0.1 mg deliveries.

9/76 Expanded tobacco introduced at 35% level; reconstituted tobacco level decreased (25 to 18%).

Discontinued.

**CARLTON KS [Carlton 85]**

1/64 Introduced - king size, dual filter with paper inner filter containing 3 mg of carbon - paper perforated immediately in front of tipping paper - TPM (8 mg), nicotine (0.5 mg) - Package label states: "Tar" = 2.5 mg, Nicotine = 0.4 mg.

5/64 TPM and nicotine reduced by changing to filter ventilation - Package label states: "Tar" = 2.7 mg, Nicotine = 0.3 mg.

10/64 TPM (3 mg) and nicotine (0.2 mg) increased - less efficient filter - Package label states: "Tar" = 3.9 mg and Nicotine = 0.4 mg.

1/65 TPM and nicotine deliveries increased by changing filter ventilation - "Tar" and nicotine data no longer stated on label.

5/65 TPM, nicotine and organic gas phase deliveries increased - Changes observed in total RTD, fiber denier and tobacco weight - Alkaloids increased slightly.

4/66 Total RTD decreased.

5/66 TPM and nicotine decreased - Filter efficiency increased as result of fiber denier change.

6/66 "Tar" and nicotine data stated on package label. "Tar" = 9.5 mg and nicotine = 0.6 mg.

10/66 TPM and nicotine decreased, 3 mg and 0.1 mg by increasing ventilation. Data on pack changed - "Tar" = 9 mg and nicotine = 0.6 mg.

4/67 Data on pack changed - "Tar" = 7 mg and Nicotine = 0.5 mg.

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- 10/67 Tar (2 mg) and nicotine (0.2 mg) decreased by increase in filter ventilation.
- 12/67 Tar (1 mg) and nicotine (0.1 mg) increased by changes in fiber shape and fiber denier.
- 2/69 A model of Carlton with 25 mm CA filter introduced with tar of 2.0 mg.
- 7/69 Filter change from 20 mm dual filter to 25 mm CA filter.
- 3/76 Tar (4 to 1 mg) and nicotine (0.4 to 0.2 mg) reduced by increased filter ventilation and lowering tobacco weight - Expanded tobacco content increased from 0 to 42%.

**CARLTON KS (BOX) [Carlton 85 (Box)]**

- 1/77 Cigarettes packaged in a flip top box to replace the 70 mm Carlton cigarettes already on the market. Similar to Carlton 85 soft pack cigarettes. Tar (1 mg) and nicotine (0.1 mg) listed on pack.
- 3/81 Tar (<1.0 to <0.01 mg) and nicotine (0.1 to 0.002 mg) data listed on pack changed as indicated.
- 8/81 Ventilation was changed from four to six rows of laser perforation. Paper porosity changed from 14 to 7 sec. Both tar and nicotine deliveries of these cigarettes remain at 0.00 mg.

**CARLTON MENTHOL KS [Carlton Menthol 85]**

- 1/72 Introduced - Mentholated version of Carlton 85 plain.
- 2/76 Tar (4 to 1 mg) and nicotine (0.4 to 0.1 mg) reduced by increased filter ventilation and lowering tobacco weight - Expanded tobacco content increased from 0 to 45%.
- 7/88 New package graphics.

**CARLTON 100**

- 4/77 National distribution - low tar (6 mg) and nicotine (0.5 mg) achieved by a 27 mm CA filter containing ventilation (52%). A low tobacco weight and rod density resulted from high ET content (35%). Tar (5 mg) and nicotine (0.5 mg) listed on pack.
- 11/77 Lower tar (5.9 to 4.4 mg) and nicotine (0.5 to 0.4 mg) deliveries resulted from a change to a more porous cigarette paper.
- 1/86 Lower tar (5 mg), nicotine (0.4 mg) and CO (5 mg) deliveries resulting from higher ventilation - lower total RTD.
- 7/88 New package graphics.
- 9/90 Higher ventilation (64 to 75%) and an increased level of paper component (1.0 to 1.3%) resulted in lower tar (3.5 to 2.5 mg) and nicotine (0.30 to 0.24 mg) deliveries. The data listed on the pack of this brand changed from 3 to 2 mg tar and 0.3 to 0.2 mg nicotine.
- 3/91 Tobacco weight increased (0.62 to 0.66 g); rod density increased (0.18 to 0.19 g/cc). No changes in smoke deliveries observed.
- 7/91 Increased filter length (27 to 31 mm), shorter rod length (73 to 69 mm) and lower tobacco weight (0.65 to 0.62 g). No changes in smoke deliveries.

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**CARLTON 100 (BOX)**

- 4/80 Introduced - Tar (0.8 mg) and nicotine (0.08 mg) - Ultra low delivery result of high filter ventilation (84%).
- 7/88 New package graphics.
- 3/91 Paper citrate increased (0.9 to 1.9%), permeability decreased (46 to 24 ml/cm<sup>2</sup> x min.), increased puff count (7.9 to 8.7 puff/cigt.).
- 7/92 A longer filter length (26.6 to 30.0 mm) resulting in shorter rod length (72.2 to 68.8 mm) and lower tobacco weight (0.623 to 0.590 g). No changes in smoke deliveries.

**CARLTON MENTHOL 100 (Box)**

- 1/82 Introduced in Texas - Tar (1.0 mg) and nicotine (0.1 mg) - similar to Carlton 100 (Box).
- 7/85 National distribution.
- 7/88 New package graphics.

**CARLTON MENTHOL 100**

- 11/77 Introduced on test market - Low delivery (4 mg tar and 0.4 mg nicotine) mentholated cigarettes similar to Carlton 100 cigarettes previously introduced. Blend contains 33% ET.
- 7/88 New package graphics.
- 9/90 The data listed on the pack changed from 3 to 2 mg tar and 0.3 to 0.2 mg nicotine for this brand.

**CARLTON SLIMS DELUXE 100 (BOX)**

- 1/84 National distribution-delivers 7 mg tar and 0.6 mg nicotine.
- Discontinued

**CARLTON SLIMS DELUXE MENTHOL 100 (BOX)**

- 1/84 National distribution-delivers 7 mg tar and 0.6 mg nicotine.
- Discontinued

**CARLTON 120**

- 7/81 Introduced - test market - Tar (7.2 mg) and nicotine (0.61 mg). The blend contains 34% expanded tobacco - ventilation system consists of two rows of laser perforation.
- 7/88 New package graphics.
- 3/92 Higher puff count (12 to 13 puffs) correlating with higher tobacco weight (0.78 to 0.81 g) and rod density (0.22 to 0.23 g/cc).

**CARLTON MENTHOL 120**

- 8/81 Introduced - test market - Tar (6.4 mg) and nicotine (0.59 mg). The ventilation system consists of two rows of laser perforation.
- 11/82 Tar (5.9 to 7.4 mg), nicotine (0.57 to 0.77 mg), and CO (4.5 to 6.6 mg) increased - ventilation (37 to 28%) decreased.



7/88 New package graphics.

**COLD HARBOR KS [Cold Harbor 85]**

6/66 Introduced - king size in soft pack - similar to Waterford with menthol added to filler.

Discontinued.

**COLONY FILTER KS [Colony Filter 85]**

9/66 Introduced - One of the first American Tobacco brands with coupons - 20 mm CA filter.

Discontinued.

**COLONY MENTHOL KS [Colony Menthol 85]**

9/66 Introduced - One of the first American Tobacco brands with coupons - 20 mm CA filter.

Discontinued.

**COLONY FILTER 100**

5/67 Introduced - 100 mm cigarette with 20 mm CA filter.

Discontinued.

**COLONY MENTHOL 100**

5/67 Introduced - 100 mm cigarette with 20 mm CA filter.

Discontinued.

**COMPASS KS [Compass 85]**

6/65 Test marketed - king size mentholated - 20 mm CA filter.

Discontinued.

**DOUBLE EIGHT 88**

7/68 Double Eight, 88 mm long, replaced Pall Mall 88 on the market - Packaged in a black and white striped pack.

Discontinued.

**FIFTY-FIFTY 100**

2/67 Introduced - 100 mm cigarette with 45 mm CA filter.

10/67 Tar (5 mg) and nicotine (0.2 mg) increased by changes in cigarette paper.

Discontinued.

**FRESH CONVERTIBLES 100**

9/69 Similar to Tennyson Convertible Menthol 100, plug-space-plug filter, with capsules containing menthol and carbon granules in space.

Discontinued.

**H. TAREYTON KS (NF) [H. Tareyton 85 (NF)]**

- 4/63 Chloride type paper component used.
- 6/63 TPM and nicotine deliveries reduced.
- 3/64 TPM reduced by 4 mg as a result of changes in paper porosity, paper component and fiber denier.

**HALF & HALF KS [Half & Half 85]**

- 5/64 Introduced - king size in soft pack with "pipe tobacco blend".

Discontinued

**ICEBERG 10 MENTHOL KS [Iceberg 10 Menthol 85]**

- 5/72 Low delivery (10 mg tar and 0.8 mg nicotine) with new Filtrona filter - Mentholated cigarette. Blend contains expanded tobacco (4%) and expanded RKS (3%).

Discontinued.

**ICEBERG MENTHOL 100**

- 2/74 Test marketed - 100 mm mentholated cigarette with a 30 mm "Filtrona-type" filter similar to the one used on Lucky Ten 100. Blend contains expanded tobacco and stems.

- 7/76 Cigarette re-engineered - Tar (10 to 5 mg) and nicotine (0.7 to 0.3 mg) decreased. Filtrona-type filter replaced by standard CA filter with 47% ventilation.

Discontinued

**LTC KS [LTC 85]**

- 8/71 LTC (low tar cigarette) - similar to Lucky Ten in all characteristics.

Discontinued.

**LONG JOHNS 120**

- 5/75 Introduced 120 mm cigarette with brown paper colored with azo dyes. Circumference 22.5 mm. Tar (20 mg) and nicotine (1.7 mg) deliveries.

Discontinued.

**LONG JOHNS MENTHOL 120**

- 5/75 Introduced 120 mm menthol cigarette with brown paper colored with azo dyes. Circumference 22.5 mm. Tar (17 mg) and nicotine (1.4 mg) deliveries.

Discontinued.

**LUCKY 100**

- 6/74 Introduced - Similar to previously marketed Lucky Ten 100 - 30 mm "Filtrona" filter.
- 7/76 Cigarette re-engineered - Tar (10 to 5 mg) and nicotine (0.8 to 0.4 mg) decreased. Filtrona-type filter replaced by standard CA filter with 47% ventilation.

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Discontinued.

**LUCKY FILTERS 100**

- 3/67 Introduced - 100 mm cigarette with a 20 mm dual filter; 10 mm crimped tobacco with carbon and 10 mm CA filter.
- 7/68 Filter length (20 to 25 mm) increased, tar lower by 1 mg.
- 8/68 Name changed - Lucky Strike 100 to Lucky Filters 100.
- 6/69 Coupon added to pack.
- 9/69 Filter change from 25 mm dual filter to 25 mm CA filter, cigarette paper porosity change (12 to 21 sec.), tar (1 mg) and nicotine (0.1 mg) increased.
- 10/69 Reconstituted tobacco decreased (20 to 15%).

Discontinued.

**LUCKY FILTERS (POLYMER) KS** [Lucky Filters (Polymer) 85]

- 9/68 85 mm version of Lucky Filters, with a new polymer filter, was introduced. The twenty-five (25) mm filter consists of a CA-space-CA (10-5-10) with the space containing approximately 100 mg of polyethylene and alumina.

Discontinued.

**LUCKY FILTERS (POLYMER) - 100**

- 9/68 100 mm version of Lucky Filters, with a new polymer filter, was introduced. The twenty-five (25) mm filter consists of a CA-space-CA (10-5-10) with the space containing approximately 100 mg of polyethylene and alumina.

Discontinued.

**LUCKY STRIKE REGULAR (NF)** [Lucky Strike 70 (NF)]

- 1/62 Paper porosity and paper component increased - TPM reduced by 5 mg.
- 7/62 TPM increased by 2 mg.
- 12/62 TPM increased by 1 mg.
- 6/63 TPM decreased by 1.5 mg.
- 5/64 TPM decreased by 2 mg by changing paper component and porosity.
- 4/66 Reconstituted tobacco content increased (7 to 11%).
- 9/66 Circumference and tobacco weight decreased.
- 10/66 TPM and nicotine increased, 6 mg and 0.2 mg respectively, by changing paper component, citrate to phosphate, and decreasing paper porosity.
- 9/68 Reconstituted material increased 9 to 12%.

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- 10/70 Reconstituted material increased 12 to 17%.
- 1/72 Expanded tobacco added to blend (4%).
- 1/74 Expanded tobacco increased 4 to 6%.
- 11/75 Lower tar (1 mg) and nicotine (0.1 mg) correlating with a lower filler rod TPM.
- 2/76 Tar delivery (27 to 25 mg) decreased by increase in paper porosity.

**LUCKY STRIKE FILTER LS [Lucky Strike Filter 80]**

- 12/75 Plain - Test marketed in a soft pack - First 80 mm cigarette in a soft pack in the U.S. - High tar (26 mg) and nicotine (1.6 mg) correlating with a low filtration efficiency.
- Discontinued.

**LUCKY STRIKE FILTER KS [Lucky Strike Filter 85]**

- 8/64 Test marketed - king size triple filter (CA; carbon on CA; CA) - filter has gas phase activity.
- 11/64 Test marketed with 20 mm CA filter - high TPM.
- 11/66 TPM (2 mg) and nicotine (0.1 mg) decreased by increase in filter efficiency.
- 12/66 TPM (2 mg) and nicotine (0.1 mg) decreased by increase in paper porosity.
- 9/67 TPM reduced by a filter change from single CA to dual filter - Dual filter consisted of inner filter made from crimped tobacco sheet with embedded carbon and an outer CA filter.
- 8/69 Change from 20 mm dual filter to 20 mm CA filter.
- 4/70 Reconstituted tobacco increase (14 to 18%).
- 5/70 Tar (3 mg) and nicotine (0.3 mg) increased as result of blend change.
- 12/71 Discontinued.

**LUCKY STRIKE KS [Lucky Strike 85]**

- 11/81 Introduced - test market - delivers 11.6 mg tar and 0.94 mg nicotine. The cigarette length is 83 mm. American Brands has no other 85 mm cigarette in the 10-12 mg tar category.
- 5/86 Expanded stems removed and reconstituted tobacco increased (20%) in blend - no changes in smoke deliveries.
- 5/91 Generic prices in Arkansas, Louisiana, Mississippi, and Tennessee; sub-generic in Iowa.

**LUCKY STRIKE KS (BOX) [Lucky Strike 85 (Box)]**

- 11/81 Introduced - test market - delivers 11.2 mg tar and 0.88 mg nicotine. The ventilation consists of one row of laser perforation. The cigarette length is 83 mm. American Brands has no other 85 mm cigarette in the 10-12 mg tar category.
- 9/89 Tar (12 to 13 mg), nicotine (0.9 to 1.0 mg) and CO (12 to 14 mg) deliveries increased as a result of lower ventilation (19 to 14%).

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5/91 Generic prices in Arkansas, Louisiana, Mississippi, and Tennessee; sub-generic in Iowa.

**LUCKY STRIKE MENTHOL KS [Lucky Strike Menthol 85]**

6/66 Introduced - 85 mm mentholated cigarette with 20 mm CA filter.

12/68 Discontinued.

5/86 Re-introduced nationally - delivers 11 mg tar, 0.8 mg nicotine and 0.6 mg smoke menthol.

Discontinued

**LUCKY STRIKE 100**

3/84 Introduced in February 1984 delivers 11 mg tar and 1 mg nicotine.

5/91 Generic prices in Arkansas, Louisiana, Mississippi, and Tennessee; sub-generic in Iowa.

**LUCKY STRIKE MENTHOL 100**

4/67 Introduced - 100 mm mentholated cigarette with 20 mm CA filter.

5/67 TPM (2 mg) and nicotine (0.2 mg) decreased by changing to a more porous paper.

7/68 Filter length (20 to 25 mm) increased, tar lower (1 mg).

12/68 Discontinued.

11/85 Reintroduced-delivers 10 mg tar, 0.8 mg nicotine and 0.8 mg smoke menthol-24 mm circumference.

3/86 National.

Discontinued

**LUCKY STRIKE LIGHTS KS [Lucky Strike Lights 85]**

11/83 Introduced - delivers 7 mg tar - has the shortest cigarette length of any king size cigarette in a soft pack.

5/91 Generic prices in Arkansas, Louisiana, Mississippi, Tennessee; subgeneric in Iowa.

**LUCKY STRIKE LIGHTS 100**

11/83 Introduced - delivers 9 mg tar.

5/91 Generic prices in Arkansas, Louisiana, Mississippi, Tennessee; subgeneric in Iowa.

**LUCKY TEN KS [Lucky Ten 85]**

8/71 Low delivery (10 mg tar and 0.8 mg nicotine) with new Filtrona filter - Blend contains expanded tobacco (5%).

4/77 A decrease in tar (9 to 8 mg) resulting from a change in filters from a 25 mm Filtrona-type filter to a 25 mm standard CA filter containing ventilation (35%). Lower total RTD noted.

12/77 Discontinued.

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**LUCKY TEN 100**

4/73 Test marketed - 30 mm Filtrona filter with triangular openings at each end and constricted in the middle. 5% expanded tobacco. Tar (9 mg) and nicotine (0.9 mg) listed on pack.

12/77 Discontinued.

**MALIBU KS [Malibu 85]**

9/88 National distribution - delivers 17 mg tar and 1.2 mg nicotine.

**MALIBU MENTHOL KS [Malibu Menthol 85]**

9/88 National distribution - delivers 16 mg tar, 1.2 mg nicotine, and 0.7 mg smoke menthol.

**MALIBU LIGHTS KS [Malibu Lights 85]**

9/88 National distribution - delivers 9 mg tar and 0.7 mg nicotine.

**MALIBU 100**

3/87 Test marketed in New Hampshire, Peoria and Spokane - first value entry - delivers 11 mg tar and 1 mg nicotine.

3/92 Longer tipping (32 to 35 mm) and less permeable cigarette paper (45 to 27 ml/cm<sup>2</sup> x min.). Fiber denier changed (6.6/Y to 5.5/Y). New package graphics.

**MALIBU MENTHOL 100**

3/87 Test marketed in New Hampshire, Peoria and Spokane - first value entry - delivers 11 mg tar, 1 mg nicotine and 0.6 mg smoke menthol.

**MALIBU (LOW TAR) MENTHOL 100**

5/92 Introduced 100 mm - 12 mg tar, 0.9 mg nicotine, and 0.6 mg menthol in smoke.

**MALIBU LIGHTS 100**

3/87 Test marketed in New Hampshire, Peoria and Spokane - first value entry - delivers 9 mg tar and 0.8 mg nicotine.

3/92 Longer filter (26.6 to 30.8 mm) resulted in lower tobacco weight (0.80 to 0.77 g) and longer tipping (32 to 35 mm). A less permeable cigarette paper (49 to 26 ml/cm<sup>2</sup> x min.). Filter weight increased (0.16 to 0.20 g) and fiber denier changed (3.9/Y to 4.8/Y). New package graphics.

**MALIBU LIGHTS MENTHOL 100**

5/92 Introduced 100 mm - 10 mg tar, 0.9 mg nicotine, and 0.6 mg menthol in smoke.

**MALIBU ULTRA LIGHTS 100**

9/89 Distributed nationally as a branded generic - delivers 6 mg tar and 0.5 mg nicotine - packaged in a yellow pack.

3/92 Longer filter (26.7 to 30.7 mm) resulted in lower tobacco weight (0.74 to 0.70 g). A less permeable cigarette paper (48 to 28 ml/cm<sup>2</sup> x min.). Ventilation changed from laser to Hauni laser and filter fiber shape changed from I to Y. New package graphics.

**MARYLAND 100**

3/70 100 mm cigarette with 100% air-cured tobacco - No RKS or reconstituted material.

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12/71 Discontinued.

**MARYLAND MENTHOL 100**

10/70 100 mm mentholated cigarette with 100% air-cured tobacco - Contains no reconstituted material or RKS.

12/71 Discontinued.

**MERMAID MENTHOL 100**

11/71 Test marketed - 25 mm CA filter - Blend contains RKS which has been processed to give an expanded appearance.

Discontinued.

**MISTY LIGHTS 100 (BOX)**

9/89 Test marketed in California and Louisiana - delivers 8 mg tar and 0.7 mg nicotine - will sell for the full price in California and will sell for the generic price in Louisiana.

**MISTY LIGHTS 100 MENTHOL (BOX)**

9/89 Test marketed in California and Louisiana - delivers 8 mg tar, 0.7 mg nicotine and 0.5 mg smoke menthol - will sell for the full price in California and for the generic price in Louisiana.

**MISTY SLIMS 100 (BOX)**

3/92 Nationally distributed - 14 mg tar and 1.1 mg nicotine.

**MISTY SLIMS MENTHOL 100 (BOX)**

3/92 Nationally distributed - 14 mg tar, 1.1 mg nicotine and 0.7 mg smoke menthol.

**MONTCLAIR MENTHOL KS [Montclair Menthol 85]**

3/62 Introduced - mentholated dual filter, carbon section - released menthol, which is concentrated there, as TPM is picked up - has no gas phase activity.

8/62 TPM, nicotine, and menthol deliveries increased.

4/63 Paper component identified as chloride type.

1/64 TPM and nicotine deliveries increased by changing filter ventilation - "Tar" and nicotine data no longer stated on label.

5/64 TPM reduced 7 mg as result of a new filter and filter ventilation - Package label states: "Tar" = 5.2 mg, Nicotine = 0.5 mg.

6/64 TPM reduced 5 mg. Nicotine delivery also decreased, RTD increased. TPM reduced 4 mg by changing paper component and porosity.

10/64 Carbon type changed, coconut to coal.

11/64 TPM (4 mg) and nicotine (0.2 mg) increased, less efficient filter - Package label states: "Tar" = 6.9 mg, Nicotine = 0.7 mg.

8/65 Menthol content and delivery increased.

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- 7/66    Menthol content and delivery increased.
- 5/67    TPM (2 mg) decreased by increasing filter ventilation.
- 6/67    TPM (4 mg) and nicotine (0.2 mg) decreased by changes in filter ventilation, filter efficiency, and paper porosity.
- 9/67    Coupon added to pack.
- 12/68    Circumference decreased (25.2 to 24.9 mm); lower tobacco weight noted.
- 4/69    Reconstituted tobacco content increased (20 to 36%).
- 8/69    Change from 20 mm dual filter to 20 mm CA filter.
- 10/69    Reconstituted tobacco decreased (36 to 28%).
- 4/70    Tar (6 mg) and nicotine (0.5 mg) increased by elimination of filter ventilation, change to less porous paper. Reconstituted tobacco decreased (28 to 19%).
- 9/71    Reconstituted tobacco increased (19 to 25%).
- 2/73    Expanded tobacco added to blend (3%) - Higher filler menthol and menthol delivery noted.
- 3/73    Expanded stems added to blend (12%) and reconstituted material decreased from 17 to 8% - No change in smoke deliveries.
- 2/75    Expanded tobacco removed from blend. Tar (1 mg) and nicotine (0.1 mg) decreased - Alkaloids and sugars lower.
- 12/75    Discontinued.

**MONTCLAIR KS [Montclair 85]**

- 5/91    Nationally distributed - delivers 16 mg tar and 1.2 mg nicotine, sell at sub-generic prices.

**MONTCLAIR LIGHTS KS [Montclair Lights 85]**

- 5/91    Nationally distributed - delivers 12 mg tar and 0.9 mg nicotine, sell at sub-generic prices.

**MONTCLAIR LIGHTS MENTHOL KS [Montclair Lights Menthol 85]**

- 5/91    Nationally distributed - delivers 12 mg tar, 0.9 mg nicotine and 0.6 mg smoke menthol; sell at sub-generic prices.

**MONTCLAIR 100**

- 7/92    A longer filter (26.8 to 30.0 mm) resulting in shorter rod length (73.0 to 69.8 mm) and lower tobacco weight (0.813 to 0.776 g).

**PALL MALL KS (NF) [Pall Mall 85 (NF)]**

- 4/63    Paper porosity and RTD increased; TPM and nicotine deliveries reduced (3 mg and 0.1 mg).
- 6/63    Nicotine delivery reduced slightly.



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- 1/64 TPM and nicotine reduction, 6 mg and 0.2 mg respectively, by changing paper component, phosphate to citrate, and increasing paper porosity.
- 10/66 TPM and nicotine increased, 7 mg and 0.3 mg respectively, by changing paper component, citrate to phosphate, and decreasing paper porosity.
- 4/67 Reconstituted material increased, 9 to 12%.
- 5/67 TPM (6 mg) and nicotine (0.2 mg) decreased by changing paper additive and increasing paper porosity.
- 1/73 Expanded tobacco added to blend (2%).
- 1/74 Expanded tobacco increased from 2 to 6%.
- 9/75 Expanded stems added to blend (3%).
- 11/75 Lower tar (1 mg) and nicotine (0.1 mg) correlating with a lower filler rod TPM.
- 6/79 Lower tar (25 to 23 mg) and nicotine (1.5 to 1.4 mg) deliveries resulting from a change to a more porous cigarette paper.
- 8/82 Cigarette length (84.8 to 83.7 mm) decreased.

**PALL MALL KS (NF) 25'S [Pall Mall 85 (NF) 25's]**

- 5/85 Test marketed in Rhode Island - contains 25 cigarettes per pack - similar to Pall Mall 85 (NF) - 200 cigarettes per carton - cigarettes packed in an 8-9-8 configuration in the pack.
- 5/86 National Distribution.

**PALL MALL "UNFILTERED" LIGHTS KS (SP) [Pall Mall "Unfiltered" Lts. 85 (SP)]**

- 9/86 Test market - Rhode Island - delivers 14 mg tar, 1 mg nicotine and has a tobacco filter with porous plugwrap and two rows of laser perforation. The tobacco filter blend (24% reconstituted tobacco, 11% expanded stems and 39% expanded tobacco) is different from the blend of the tobacco column.

Discontinued

**PALL MALL 88**

- 5/68 Pall Mall cigarettes, 88 mm long, introduced in white pack with gold lettering.

Discontinued.

**PALL MALL 100**

- 10/64 Plain - Test marketed in new air tight hermetically sealed "polyfoil pak."
- 7/81 Freon expanded tobacco has been added at the 9% level resulting in a lower tobacco weight (0.905 to 0.865 g).
- 7/89 Ventilation was incorporated (11%) resulting in lower tar (16 to 15 mg), nicotine (1.2 to 1.1 mg) and CO (16 to 13 mg) deliveries.

- 11/89 Ventilation removed resulting in higher tar (15 to 17 mg), nicotine (1.1 to 1.2 mg) and CO (14 to 15 mg) deliveries.
- 3/90 Tar (17 to 15 mg), nicotine (1.2 to 1.1 mg) and CO (15 to 13 mg) deliveries decreased as a result of ventilation (none to 9%). A lower tobacco weight (0.883 to 0.834 g) and rod density (0.254 to 0.239 g/cc) resulted from an increase in expanded tobacco (11 to 17%).
- 5/90 Name changed to Pall Mall Gold 100 - new package graphics introduced.

**PALL MALL MENTHOL 100**

- 10/74 Menthol - Test marketed in new air tight hermetically sealed "polyfoil pak."

Discontinued.

**PALL MALL EXTRA MILD LS [Pall Mall Extra Mild 80]**

- 7/72 Low delivery (9 mg tar and 0.7 mg nicotine) with new Filtrona molded filter - Blend contains expanded tobacco (4%) - Similar to Lucky Ten 85 in most characteristics.

12/77 Discontinued.

**PALL MALL EXTRA LIGHT KS [Pall Mall Extra Light 85]**

- 8/72 85 mm cigarette similar to 80 mm version previously introduced in 7/72.

6/76 Tar (6 mg) and nicotine (0.7 mg) decreased - Filtrona filter with no ventilation was replaced by a standard CA filter with 45% ventilation. Tobacco weight and rod density were higher as result of elimination of ET from blend.

4/78 Brand name changed from Pall Mall Extra Mild 85 to Pall Mall Extra Light 85. No changes in smoking or physical characteristics. Tar delivery listed on pack as "7 mg or Less".

Discontinued

**PALL MALL FILTER LS (BOX)**

- 5/71 Test marketed in hard box (80 mm) - Tar (19 mg) and nicotine (1.2 mg) deliveries.

12/75 Reintroduced - plain - test marketed in a red flip top box similar in color and design to the soft pack used for Pall Mall 85 Nonfilter cigarettes - High tar (24 mg) and nicotine (1.5 mg) deliveries correlating with a low filtration efficiency.

Discontinued.

**PALL MALL FILTER KS [Pall Mall Filter 85]**

- 5/71 Test marketed in soft pack (85 mm) - Tar (20 mg) and nicotine (1.3 mg) deliveries.

10/75 Reintroduced - plain - test marketed in a red soft pack similar to that used for Pall Mall 85 Nonfilter cigarettes - Filter RTD extremely low resulting in a low filtration efficiency - Tar (25 mg) and nicotine (1.6 mg) deliveries.

12/76 Tar (25 to 18 mg) and nicotine (1.6 to 1.2 mg) decreased as result of a longer (17 to 20 mm), more efficient filter.

**PALL MALL FILTER LIGHTS KS [Pall Mall Filter Lights 85]**

- 11/86 The incorporation of ventilation (14%) and a change to a more porous cigarette paper resulted in lower tar (16 to 13 mg), nicotine (1.2 to 1.0 mg) and CO (16 to 12 mg) deliveries. The pack has been modified by adding a blue banner to the design.

**PALL MALL FILTER 95**

- 3/66 Introduced - 95 mm long cigarette in gold crush-proof box with hinge top - 15 mm CA filter.
- 2/68 Tar (6 mg) and nicotine (0.3 mg) reduced by increasing filter length (15 to 25 mm) and tipping paper (21 to 30 mm).
- 3/71 Brand discontinued - Replaced with 100 mm size in crush- proof box.
- Discontinued.

**PALL MALL FILTER MENTHOL 95**

- 11/65 Introduced - 95 mm long in new type package - mentholated - 15 mm CA filter.
- 7/67 Tipping paper increased (19 to 21 mm).
- 2/68 Tar (6 mg) and nicotine (0.2 mg) reduced - single package comprised of twin crush-proof boxes - one box contains ten mentholated and the other ten non-mentholated cigarettes.
- Discontinued.

**PALL MALL FILTER 100**

- 10/64 Test marketed - 100 mm long - Same as Pall Mall nonfilter with 15 mm CA filter.
- 11/66 TPM (5 mg) and nicotine (0.2 mg) decreased by an increase in filter efficiency.
- 2/67 Tipping paper increased 19 to 21 mm.
- 4/67 Reconstituted material increased 9 to 12%.
- 5/67 TPM (3 mg) decreased by increasing filter length (17 to 20 mm) and by increasing paper porosity.
- 10/67 Tar (2 mg) and nicotine (0.3 mg) reduced by increases in filter length (20 to 25 mm) and tipping paper (24 to 30 mm).
- 11/68 Circumference decreased (24.7 to 24.4 mm) and tobacco weight decreased, no change in tar or nicotine.
- 10/70 Tar (1 mg) and nicotine (0.1 mg) reduced by an increase in filter efficiency - High total and filter RTD noted.
- 3/74 Filter length (25 to 27 mm) and tipping paper (30 to 32 mm) increased - No change in smoke deliveries.
- 4/75 Addition of 3% ES to blend.
- Discontinued.

- 5/87 Introduced in Atlanta, Georgia - delivers 14 mg tar and 1 mg nicotine - packaged in a red pack with a blue banner.

**PALL MALL FILTER MENTHOL 100**

- 10/66 Introduced - 100 mm mentholated cigarette with 15 mm CA filter.
- 2/67 Tipping paper increased (19 to 21 mm).
- 5/67 TPM (2 mg) decreased by increasing filter length (17 to 20 mm) and by increasing paper porosity.
- 10/67 Tar (2 mg) and nicotine (0.3 mg) reduced by increases in filter length (20 to 25 mm ) and tipping paper (24 to 30 mm).
- 3/68 Tar (1 mg) and nicotine (0.1 mg) reduced by a blend change.
- 11/68 Circumference decreased (24.9 to 24.6 mm) and tobacco weight decreased, no change in tar and nicotine.
- 10/69 Tar (1 mg) and nicotine (0.1 mg) increased by changes in blend and heavier tobacco weight; smoke and filler menthol decreased.
- 10/69 Reconstituted tobacco decreased (22 to 17%).
- 10/70 Reconstituted tobacco increased (16 to 21%).
- 5/72 Addition of expanded RKS (11%) and expanded tobacco (3%) to blend - Reconstituted tobacco content reduced (21 to 7%). Alkaloids increased and fiber shape changed from X to Y - shape. Total and filter RTD increased.
- 2/75 Expanded tobacco removed from blend. Tar (1 mg) and nicotine (0.1 mg) decreased. Alkaloids and sugars lower.
- Discontinued.

**PALL MALL FILTER 100 (BOX)**

- 4/71 Plain - This new 100 mm cigarette in a crush-proof box replaces the previously marketed Pall Mall 95 cigarettes in a flat twin pack.
- Discontinued.

**PALL MALL FILTER MENTHOL 100 (BOX)**

- 4/71 Menthol - This new 100 mm cigarette in a crush-proof box replaces the previously marketed Pall Mall 95 cigarettes in a flat twin pack.
- Discontinued.

**PALL MALL GOLD LIGHTS 100 (BOX)**

- 3/92 Test marketed in Hartford, CT - delivers 16 mg tar and 1.3 mg nicotine. The soft pack is in national distribution.

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**PALL MALL LIGHTS 100**

- 7/78 Introduced - 100 mm low tar (12 mg) and nicotine (1.0 mg) brand characterized by 27 mm filter with 24% ventilation. Blend contains 8% expanded tobacco and 2% expanded stems.
- 2/81 Tar (10.6 to 8.1 mg), nicotine (0.94 to 0.74 mg) and CO (10.3 to 7.6 mg) reduced - increase in filter ventilation (28 to 47%) decrease in filter RTD (4.6 to 3.6 ).
- 7/83 Tar (8.4 to 10.9 mg), nicotine (0.8 to 1.0 mg) and CO (8 to 10 mg) increased due to reduced ventilation (53 to 36%) - total RTD increased (3.2 to 4.2).
- 1/84 CO (10 to 12 mg) delivery increased due to decreased filter ventilation (37 to 23%) - higher filter RTD (3.0 to 4.2 in. H<sub>2</sub>O) correlated with higher efficiency (48 to 54%).
- 9/84 Tar (10.3 to 9.3 mg) and CO (12.1 to 10.4 mg) decreased - ventilation increased (22 to 28%).

**PALL MALL LIGHT MENTHOL 100**

- 4/79 Introduced - 13 mg tar and 1.1 mg nicotine - Blend contains 12% expanded tobacco and 12% expanded stems. Cigarette has mechanically perforated cigarette paper and no ventilation.

Discontinued

**PINNACLE KS [Pinnacle 85]**

- 9/70 New 85 mm cigarette with 25 mm geometrically shaped filter similar to that on Vantage (RJR); however, filter is reversed.

Discontinued.

**PINNACLE MENTHOL KS [Pinnacle Menthol 85]**

- 4/65 Test marketed - king size - dual filtered mentholated - tobacco blend markedly different.

Discontinued.

**RIVIERA MENTHOL KS (BOX)**

- 1/92 Test marketed in Detroit, Michigan delivers 17 mg tar, 1.1 mg nicotine and 0.7 mg smoke menthol.

**RIVIERA MENTHOL KS**

- 7/92 Introduced - 17 mg tar, 1.3 mg nicotine and 0.6 mg menthol in smoke.

**RIVIERA MENTHOL 100**

- 7/92 Introduced - 17 mg tar, 1.2 mg nicotine and 0.5 mg menthol in smoke.

**SAFARI 100**

- 1/73 Test marketed - 100 mm cigarette with 25 mm CA filter. New type package - pouch pack with fin seals.

Discontinued.

**SILVA THINS 100**

- 9/67 100 mm cigarette with 20 mm CA filter; small circumference (22 mm) and 26% reconstituted material.

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- 5/68 Reconstituted tobacco decreased (26 to 13%) and paper porosity increased - No change in smoke deliveries.
- 7/70 Blend changed as indicated by higher alkaloids and a markedly lower reducing sugar - The nicotine delivery (0.1 mg) was increased by this change.
- 2/72 Expanded stem added to blend at 10% level and reconstituted tobacco content reduced 18 to 11% - Filter changed from 20 mm paper to 25 mm CA. Lower tobacco weight and rod density noted. Tar decreased (2 mg).
- 3/73 Expanded stem content increased (10 to 16%).
- 8/77 Lower tar (16 to 12 mg) and nicotine (1.2 to 1.1 mg) deliveries resulting from introduction of filter ventilation (30%). Increases in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) were also noted.
- 5/82 The addition of 4% ET - ES increased from 8 to 16% resulting in a lower tobacco weight.
- 11/85 Tar (11 to 12 mg) and CO (10 to 11 mg) increased as a result of lower ventilation (30 to 20 %).

**SILVA THINS 100 (BOX)**

- 3/86 Test marketed - delivers 10 mg tar, 0.8 mg nicotine and has longer filter, longer tipping paper length, larger circumference and less porous cigarette paper than the Soft Pack.

**SILVA THINS MENTHOL 100**

- 8/68 100 mm cigarette with small circumference - Similar to Silva Thins Plain in all characteristics except for menthol.
- 9/71 Blend changed as indicated by higher alkaloids and lower reducing sugars. Filler rod TPM increased (2 mg) and tar delivery increased (1 mg).
- 5/74 Filter length increased 20 to 25 mm - No change in smoke deliveries.
- 8/77 Lower tar (15 to 12 mg) and nicotine (1.1 to 1.0 mg) deliveries resulting from introduction of filter ventilation (30%). Increases in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) were also noted. Introduced expanded stem at 3% level.
- 5/79 Lower tar (12 to 7 mg) and nicotine (1.0 to 0.8 mg) deliveries correlating with a more efficient filter and a lower filler rod TPM.
- 8/79 Tar (7 to 11 mg) and nicotine (0.8 to 1.0 mg) increased by a decrease in filter ventilation.
- 5/80 Changed the filter from 27 mm paper to 27 mm CA - Tar (11 to 12 mg) and nicotine (0.9 to 1.1 mg) increased as result of less efficient filter.
- 5/82 The addition of 4% ET - ES increased from 8 to 16% resulting in a lower tobacco weight.
- 11/85 Tar (11 to 12 mg) and CO (10 to 11 mg) increased as a result of lower ventilation (30 to 20%)-higher smoke menthol delivery (0.4 to 0.5 mg).

**SILVA THINS MENTHOL 100 (BOX)**

- 3/86 Test marketed - delivers 10 mg tar, 0.8 mg nicotine and 0.4 mg smoke menthol and has a longer filter, longer tipping paper length, larger circumference and less porous cigarette paper than the Soft Pack.

**SUPER M MENTHOL 100**

- 5/74 Test marketed - 100 mm mentholated cigarette in new air tight hermetically sealed "polyfoil pak" - Same pack as used on Safari 100.

Discontinued.

**SWEET CAPORAL 85**

- 10/65 Introduced - king size with 20 mm CA filter.

Discontinued.

**TALL 120**

- 8/75 Plain - Introduced 120 mm cigarette with 30 mm CA filter - White stripped cigarette paper - Tar (19 mg) and nicotine (1.4 mg) deliveries.

- 9/83 Tar (18 to 21 mg), nicotine (1.6 to 1.7 mg), and CO (20 to 21 mg) increased - ventilation reduced (36 to 30%).

- 9/89 Lower tar (19 to 17 mg), nicotine (1.6 to 1.5 mg) and CO (19 to 17 mg) deliveries resulted from an increased filter ventilation (36 to 45%). A lower puff count (15 to 14) and a lower total RTD (133 to 108 mm) were also observed.

**TALL MENTHOL 120**

- 8/75 Menthol - Introduced 120 mm cigarette with 30 mm CA filter - White striped cigarette paper - Tar (19 mg) and nicotine (1.4 mg) deliveries.

- 9/83 Tar (18 to 20 mg), nicotine (1.6 to 1.7 mg), and CO (17 to 21 mg) increased - ventilation decreased (38 to 31%).

**TAREYTON KS [Tareyton 85]**

- 4/63 Paper component now being used, identified as chloride type.
- 6/63 TPM reduced by 3 mg - Nicotine delivery decreased by 0.1 mg. Total and filter RTD increased.
- 2/64 TPM and nicotine reduced (4 mg and 0.1 mg) - Change in paper component and porosity.
- 8/64 Fiber shape changed, I to cloverleaf.
- 11/64 Fiber denier changed, 5.0 to 4.0.
- 5/65 Fiber shape changed, cloverleaf to I.
- 10/65 Reconstituted tobacco content increased (10 to 14%).
- 2/67 Tipping paper increased 19 to 24 mm, paper porosity increased - TPM unchanged.

- 4/67 TPM (1 mg) decreased as result of change in filter length - Paper porosity decreased 14 to 20 seconds.
- 10/69 Reconstituted tobacco decreased 20 to 15%.
- 4/75 Addition of 3% ES to blend.
- 7/76 Tar decreased (19 to 17 mg) resulting from a change to a more porous cigarette paper.
- 8/78 Freon expanded tobacco introduced to the blend at the 9% level resulting in a lower tobacco weight. Change resulted in lower tar (16 to 14 mg) and nicotine (1.2 to 1.0 mg) deliveries.
- 5/79 Lower tar (15 to 13 mg) correlating with a higher RTD for the inner paper filter.

#### **TAREYTON LIGHTS KS [Tareyton Lights 85]**

- 1/77 Test marketed - an 85 mm low tar (8 mg) and nicotine (0.6 mg) cigarette. 27 mm dual filter with filter ventilation (44%) consisting of 17 mm CA outer filter and 10 mm paper inner filter. Inner filter contains carbon granules. Longest filter of any 85 mm cigarette on the market.
- 2/80 Tar (7 to 4 mg) and nicotine (0.7 to 0.3 mg) decreased resulting from an increase in filter ventilation and lower tobacco weight. Lower tobacco weight result of the addition of expanded tobacco (32%).
- 11/86 Tar (5 to 6 mg), nicotine (0.4 to 0.5 mg) and CO (5 to 6 mg) increased as a result of decreased ventilation (53 to 41%).
- 11/90 Blend change from 20 to 24% reconstituted tobacco, 41% to 24% expanded tobacco and 3 to 0% expanded stems; tobacco weight increased (0.586 to 0.667 g) and rod density increased (0.203 to 0.227 g/cc). A higher puff count (7.2 to 8.3) and static burning time (6.0 to 7.3 min.) correlated with these changes; paper component decreased (1.3 to 0.5%).

#### **TAREYTON MENTHOL KS [Tareyton Menthol 85]**

- 9/77 Introduced on test market - Low delivery (7 mg tar and 0.6 mg nicotine), mentholated brand similar in most characteristics to Tareyton Lights 85 previously introduced. Contains no charcoal in filter.

Discontinued.

#### **TAREYTON 100**

- 4/67 Introduced - 100 mm 20 mm dual filter.
- 5/67 TPM (2 mg) decreased as result of changing paper porosity.
- 10/67 Tar (2 mg) and nicotine (0.2 mg) reduced by increases in filter length (20 to 25 mm) and tipping paper (24 to 30 mm).
- 9/68 Filter length (20 to 25 mm) increased, no changes in smoke deliveries.
- 11/70 Tar (2 mg) and nicotine (0.1 mg) increased correlating with a reduction in filter efficiency.
- 12/71 Tar (2 mg) increased - Higher filler rod TPM and puff count.
- 10/73 Filter length (25 to 27 mm) and tipping paper (30 to 32 mm) increased. Lower tar (1 mg) noted.

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- 4/75 Addition of 3% ES to blend.
- 7/76 Tar (19 to 17 mg) and nicotine (1.4 to 1.3 mg) decreased resulting from a change to a more porous cigarette paper.
- 5/78 Lower tar (17 to 15 mg) and nicotine (1.3 to 1.2 mg) deliveries resulting from decrease in filler rod TPM delivery.
- 8/78 Freon expanded tobacco introduced to the blend at the 9% level resulting in a lower tobacco weight. Change resulted in lower tar (15 to 13 mg) and nicotine (1.2 to 1.0 mg) deliveries.

**TAREYTON LONG LIGHTS 100**

- 1/78 Introduced - 100 mm low tar (8 mg) and nicotine (0.7 mg) cigarette. 27 mm dual filter with filter ventilation (37%) consisting of 17 mm CA outer filter and 10 mm paper inner filter. Inner filter contains carbon granules. Blend contains 7% expanded tobacco.
- 8/79 Tar (9 to 7 mg) and nicotine (0.8 to 0.7 mg) decreased resulting from an increase in filter ventilation (30 to 47%).

**TAREYTON ULTRA LOW TAR MENTHOL KS [Tareyton Ultra Low Tar Men. 85]**

- 3/79 Test marketed - These new cigarettes deliver 2 mg tar and 0.1 mg nicotine - 25 mm CA filter with 75% ventilation and blend containing 34% expanded tobacco.

Discontinued.

**TENNYSON MENTHOL KS [Tennyson Menthol 85]**

- 10/65 Introduced - king size mentholated - carbon portion of dual filter has no gas phase activity.

Discontinued.

**TENNYSON MENTHOL 100**

- 10/67 100 mm mentholated cigarette - menthol contained in gelatin capsules which release menthol when filter is pinched - similar filter to that in Waterford.

Discontinued.

**TWIST 100**

- 6/73 Test marketed - 100 mm cigarette with lemon and menthol flavoring. Blend contains 10% expanded stems.

12/75 Discontinued.

**ULTRA CARLTON KS (BOX)**

- 7/88 Introduced - tar <0.01, nicotine <0.002.

**WATERFORD LS [Waterford 80]**

- 9/65 Introduced - long size in crush proof box - novel filter containing two types of capsules in addition to charcoal - One of the capsule types contains water.

12/66 Discontinued.

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**WATERFORD KS [Waterford 85]**

2/66     Introduced - king size in soft pack - novel filter contains only one type capsule containing water  
         - Charcoal also present.

Discontinued.

**WHITE LEAF KS [White Leaf 85]**

6/67     Test marketed - 85 mm filter cigarette with bleached all tobacco wrapper instead of cigarette  
         paper.

Discontinued.

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## BROWN & WILLIAMSON

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### ARCTIC LIGHTS KS [Arctic Lights 85]

9/78 Test marketed - 85 mm cigarette delivering 9 mg tar and 0.7 mg nicotine. High alkaloid blend containing 14% expanded stems - 25 mm CA filter with 33% ventilation.

Discontinued.

### ARCTIC LIGHTS 100

9/78 Test marketed - 100 mm cigarette delivering 10 mg tar and 0.8 mg nicotine. High alkaloid blend containing 14% expanded stems - 27 mm CA filter with 39% ventilation.

Discontinued.

### AVALON KS [Avalon 85]

7/63 Introduced - test market - king size, triple filter, in soft pack.

12/64 Discontinued.

### BARCLAY LS (BOX) [Barclay 80 (Box)]

10/80 Test marketed - ultra low tar (3.2 mg) - 27 mm CA filter containing 64% ventilation-blend contains 11% reconstituted tobacco, 18% expanded tobacco and 11% expanded stems.

2/81 Tar (3.0 to 1.3 mg), nicotine (0.17 to 0.08 mg) and CO(3.0 to 1.2 mg) reduced as result of increase in filter ventilation (66 to 84%) - rows of (MP) holes increased (2 to 3) - elimination of reconstituted tobacco, expanded stems - increase in expanded tobacco (17 to 36%) - lower tobacco weight (0.582 to 0.520 g) - increase in total alkaloids (1.71 to 2.67%).

1/85 Reconstituted tobacco (19%) and expanded stems (5%) added to blend - expanded tobacco decreased (32 to 10%) - tobacco weight (0.533 to 0.628 g) and rod density (0.203 to 0.240 g/cc) increased.

Discontinued.

### BARCLAY ULTRA LIGHTS LS (BOX) [Barclay Ultra Lights 80 (Box)]

11/84 Introduced in Wichita, Kansas - delivers 1 mg tar and 0.1 mg nicotine - utilizes the same filter as the Barclay 80 - similar to Barclay 80 in most characteristics.

Discontinued.

### BARCLAY KING SIZE (BOX) [Barclay 83 (Box)]

9/90 Introduced nationally - smoke deliveries (2 mg tar, 0.2 mg nicotine) are similar to deliveries of Barclay 80 (Box). Product utilizes 27 mm actron filter.

### BARCLAY KING SIZE [Barclay 85]

9/80 Test marketed - ultra low tar (2.5 mg) - 27 mm CA filter with 77% filter ventilation-blend contains 32% expanded tobacco and no reconstituted tobacco or expanded stems.

- 1/85 Reconstituted tobacco (19%) and expanded stems (5%) added to blend - expanded tobacco decreased (32 to 10%) tobacco weight (0.550 to 0.678 g) and rod density (0.194 to 0.240 g/cc) increased.
- 1/86 Test marketed version of Barclay 85 with three rows of micro-mechanical perforation and one row of Hauni laser perforation and an Actron filter (manufactured by American Filtrona) that uses cellulose acetate as the plugwrap.
- 5/86 National distribution with filter design introduced in January, 1986.

**BARCLAY MENTHOL KING SIZE [Barclay Menthol 85]**

- 7/81 Introduced - nationally - 85 mm mentholated cigarette. Tar (1.4 mg) and nicotine (0.11 mg) - filter ventilation is achieved by a system of mechanical perforation and four longitudinal grooves along the filter. These cigarettes are similar in most characteristics to Barclay 85.
- 9/85 Uses cellulose acetate film as the plugwrap - filter manufactured by American Filtrona 9/85
- 7/87 Discontinued.

**BARCLAY ULTRA LIGHTS KING SIZE [Barclay Ultra Lights 85]**

- 11/84 Introduced in Wichita, Kansas - delivers 1 mg tar and 0.1 mg nicotine - utilizes the same filter as the Barclay 85 - similar to Barclay 85 in most characteristics.
- Discontinued.

**BARCLAY 100**

- 9/80 Test marketed - ultra low tar (3.5 mg) - 27 mm CA filter with 69% filter ventilation - blend contains 26% expanded tobacco, 6% reconstituted tobacco and 12% expanded stems.
- 7/81 Introduced nationally.
- 7/85 Decreased the amount of expanded tobacco (25 to 12%) and increased the amount of reconstituted material (7 to 17%) increased tobacco weight and rod density.
- 11/85 Tar (3 to 5 mg) nicotine (0.3 to 0.4 mg) and CO (2 to 3 mg) increased - lower ventilation (76 to 69%).
- 1/86 Test marketed version of Barclay 100 with two rows of micro-mechanical perforation and one row of Hauni laser perforation and an Actron filter (manufactured by American Filtrona) that uses cellulose acetate as the plugwrap.
- 5/86 National distribution with filter design introduced in January, 1986.

**BARCLAY MENTHOL 100**

- 7/81 Introduced - nationally - 100 mm mentholated cigarette. Tar (3.4 mg) and nicotine (0.28 mg) - filter ventilation is achieved by a system of mechanical perforation and four longitudinal grooves along the filter. These cigarettes are similar in most characteristics to Barclay 100.
- 9/85 Uses cellulose acetate film as the plugwrap - filter manufactured by American Filtrona.
- 7/87 Discontinued.

**BARCLAY LIGHTS ULTRA THINS 100 (BOX)**

11/87 Test market - Atlanta, Georgia - delivers 9 mg tar, 0.7 mg nicotine - 17 mm circumference.

Discontinued.

**BARCLAY LIGHTS ULTRA THINS MENTHOL 100 (BOX)**

11/87 Test market - Atlanta Georgia - delivers 9 mg tar, 0.7 mg nicotine, and 0.7 mg smoke menthol - 17 mm circumference.

Discontinued.

**BARCLAY ULTRA LIGHTS 100**

11/84 Introduced in Wichita, Kansas - delivers 4 mg tar and 0.4 mg nicotine - utilizes the same filter as the Barclay 100 - similar to Barclay 100 in most characteristics.

Discontinued.

**BELAIR KING SIZE [Belair 85]**

6/60 Introduced - king size recessed filter, mentholated.

6/62 Lighter filter.

6/62 Flush-type filter.

12/63 TPM reduced, and paper porosity increased - Carbowax (5%) observed in the filter.

1/64 Filler alkaloids increased resulting in higher nicotine delivery.

3/64 Change in paper component, phosphate to citrate.

8/64 TPM reduced (2 mg).

9/64 Filler change reduced nicotine delivery by reducing total alkaloids.

3/66 Fiber shape changed from cloverleaf to X-shape.

5/66 TPM (1 mg) increased.

1/67 TPM (4 mg), nicotine (0.2 mg), and menthol in smoke (0.1 mg) decreased as result of change in paper porosity.

8/67 TPM (2 mg) decreased as result of blend change.

3/68 Tar (2 mg) reduced by increase in filter efficiency; fiber shape changed X to Y-shape.

7/68 Tar (1 mg), nicotine (0.2 mg), and menthol (0.5 mg) deliveries were reduced by changes in filter length (20 to 21 mm) and tipping paper (24 to 25 mm).

4/70 Reconstituted tobacco (7 to 11%) and RKS (12 to 16%) increased.

2/72 Addition of expanded RKS to blend replacing portion of regular RKS.

5/73 Lower total alkaloids (0.2%) and nicotine delivery (0.2 mg).

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- 7/73 Tipping paper length increased (25 to 26 mm) - No other changes.
- 3/76 Menthol in smoke content increased by increasing filler menthol.
- 5/76 Filler alkaloids and total reducing sugars were lower. Nicotine delivery reduced by 0.1 mg.
- 8/77 Lower tar delivery (15 to 13 mg) resulting from a change to a more porous, mechanically perforated cigarette paper.
- 5/78 Lower tar (13 to 12 mg) due to decrease in filler rod TPM delivery.
- 10/78 The addition of expanded tobacco at the 6% level was observed. This change resulted in lower tobacco weight and rod density and an increase in total RTD.
- 1/79 Lower tar (12 to 8 mg) and nicotine (0.9 to 0.8 mg) deliveries resulting from the introduction of filter ventilation (26%) and an increase in tipping paper length.
- 1/84 Tar (9 to 10 mg), nicotine (0.76 to 0.82 mg) and filler rod TPM (26.3 to 29.8 mg) increased resulting from less porous paper (7 to 15 sec.) with lower level of paper component (0.6 to 0.2%) - decreased total and filter RTD.
- 9/87 Increased filter and tipping lengths - lower tobacco weight resulted - no changes in smoke deliveries.
- 3/89 Discontinued.

**BELAIR 100**

- 9/68 100 mm cigarette with 25 mm CA filter - Similar to Kool 100.
- 9/69 Coupon added to pack.
- 10/69 RKS decreased (17 to 13%).
- 8/71 Filter fiber shape changed - X-shape to Y-shape.
- 2/72 Addition of expanded RKS to blend replacing portion of regular RKS.
- 12/72 Change in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) - Tar (2 mg) and nicotine (0.1 mg) decreased.
- 5/73 Lower total alkaloids (0.1%) and nicotine delivery (0.1 mg).
- 3/76 Menthol in smoke content increased by increasing filler men.
- 8/77 Lower tar delivery (16 to 14 mg) resulting from a change to a more porous, mechanically perforated cigarette paper.
- 5/78 Lower tar (14 to 13 mg) due to decrease in filler rod TPM delivery. Lower tobacco weight and rod density were also noted.
- 10/78 The addition of expanded tobacco at the 6% level was observed. This change resulted in lower tobacco weight and rod density and an increase in total RTD.

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- 1/79 Lower tar (13 to 8 mg) and nicotine (1.0 to 0.7 mg) deliveries resulting from the introduction of filter ventilation (33%) and an increase in tipping paper length (32 to 36 mm). A change to a less porous paper (7 to 12 sec.) and the removal of expanded tobacco in the blend was noted.
- 11/80 Addition of 10% expanded tobacco resulted in a lower tobacco weight and rod density. Tar (7 to 8 mg) and CO (10 to 11 mg) increased as a result of a decrease in filter ventilation (37 to 24%).
- 3/81 Expanded tobacco eliminated (10 to 0%) increase in tobacco weight.
- 9/82 Tar (10.2 to 8.8 mg), nicotine (0.81 to 0.74) and CO (12.0 to 10.2 mg) decreased - increased ventilation (25 to 34%).
- 5/84 Tar (9.2 to 7.5 mg), nicotine (0.67 to 0.58 mg), CO (8.0 to 6.6 mg) and menthol (0.38 to 0.32 mg) decreased - increased ventilation (36 to 45%).
- 3/89 Discontinued.

**BELAIR LIGHTS KING SIZE [Belair Lights 85]**

- 3/89 Test marketed in Illinois as a branded generic. This cigarette delivers 10 mg tar, 0.9 mg nicotine and 0.5 mg smoke menthol.

Discontinued.

**BELAIR LIGHTS 100**

- 3/89 Test marketed in Illinois as a branded generic. This cigarette delivers 10 mg tar, 0.9 mg nicotine and 0.5 mg smoke menthol.

Discontinued.

**BREEZE KING SIZE [Breeze 85]**

- 5/63 Introduced - test market - king size mentholated, in soft pack - similar to Kool.

Discontinued.

**CAPRI 100 (BOX)**

- 1/87 Test marketed in Louisiana - delivers 9 mg tar and 0.7 mg nicotine - has a 17 mm circumference.

**CAPRI 100 MENTHOL (BOX)**

- 1/87 Test marketed in Louisiana - delivers 9 mg tar, 0.7 mg nicotine and 0.7 mg smoke menthol - has a 17 mm circumference.

**CAPRI LONGS 100**

- 9/67 100 mm mentholated cigarette with 22 mm CA filter - Lower smoke menthol than Kool 100.
- 11/68 Filter length (22 to 25 mm) and tipping paper length (27 to 30 mm) increased - Paper porosity changed (21 to 10 sec.) - No change in tar.
- 12/79 Discontinued.

**CAPRI 110**

3/75 Introduced a new 110 mm cigarette 24.7 mm in circumference. Tar (19 mg) and nicotine (1.5 mg); 30 mm CA filter; 35 mm tipping paper.

12/75 Discontinued.

**CAPRI MENTHOL 110**

5/75 Introduced a new 110 mm menthol cigarette 24.7 mm in circumference. Tar (19 mg) and nicotine (1.5 mg); 30 mm CA filter; 35 mm tipping paper.

12/75 Discontinued.

**CAPRI 120 (BOX)**

11/88 Test marketed in New Orleans, LA - delivers 13 mg tar and 0.9 mg nicotine - has a 17 mm circumference.

**CAPRI MENTHOL 120 (BOX)**

11/88 Test marketed in New Orleans, LA - delivers 12 mg tar, 0.8 mg nicotine and 1 mg smoke menthol - has a 17 mm circumference.

**CHEVRON KING SIZE [Chevron 85]**

3/63 Introduced - test market - king size filter, in soft pack similar to Viceroy.

Discontinued.

**CORONET KING SIZE (NF) [Coronet 85 (NF)]**

10/62 Introduced - king size, nonfilter in new aluminum foil wrapper - similar to Raleigh plain end.

Discontinued.

**DOVER LONGS 100**

2/67 Introduced - 100 mm cigarette with 22 mm CA filter.

11/67 Tar (4 mg) and nicotine (0.4 mg) reduced by changes in the filter and in the blend.

12/68 Discontinued. 12/68

**ELI CUTTER REGULAR (NF) [Eli Cutter 70 (NF)]**

11/84 Introduced in Sacramento, CA and Denver, CO - delivers 21 mg tar and 1.3 mg nicotine - packed in a black pack.

Discontinued

**ELI CUTTER LONG SIZE (BOX) [Eli Cutter 80 (Box)]**

11/84 Introduced in Sacramento, CA and Denver, CO - delivers 15 mg tar and 1 mg nicotine - packed in a black pack micro-mechanical ventilation system.

Discontinued.



**ELI CUTTER KING SIZE [Eli Cutter 85]**

11/84 Introduced in Sacramento, CA and Denver, CO - delivers 15 mg tar and 1 mg nicotine - packed in a black pack micro-mechanical ventilation system.

9/86 Re-introduced in a red package in Oklahoma - delivers 16 mg tar, 1.1 mg nicotine.

Discontinued

**ELI CUTTER LIGHTS KING SIZE [Eli Cutter Lights 85]**

9/86 Test marketed in Oklahoma - packaged in a beige pack. This cigarette delivers 11 mg tar and 0.9 mg nicotine. This brand contains a new type of reconstituted tobacco that is a cast sheet material containing diammonium phosphate.

Discontinued

**FACT KING SIZE [Fact 85]**

7/75 Test marketed - CA filter with a pocket in the middle containing yellowish granules identified as Duolite - Tar (14 mg) and nicotine (1.0 mg) deliveries.

4/76 Cigarette paper changed to mechanically perforated with citrate as paper component. Tipping paper increased from 30 to 32 mm.

7/77 Introduction of Hauni ventilation (20%) resulted in lower tar delivery (14 to 11 mg).

9/77 Re-introduced with new packaging and lower tar (9 mg) and nicotine (0.7 mg) deliveries. Lower deliveries accomplished using more efficient filter and higher level of ventilation (30%). Continues to utilize "Duolite" granules in filter.

12/77 Discontinued.

**FACT MENTHOL KING SIZE [Fact Menthol 85]**

4/76 Menthol - test marketed CA filter with a pocket in the middle containing yellowish granules identified as Duolite. Tar (13 mg) and nicotine (0.9 mg) deliveries. Cigarette paper - mechanically perforated with citrate as paper component.

7/77 Introduction of Hauni ventilation (30%) resulted in lower tar delivery (13 to 11 mg).

9/77 Re-introduced with new packaging and lower tar (9 mg) and nicotine (0.7 mg) deliveries. Lower deliveries accomplished using a more efficient filter and higher level of ventilation (30%). Continues to utilize "Duolite" granules in filter.

12/77 Discontinued.

**FIESTA LONG SIZE (SOFT PACK) [Fiesta 80 (Soft Pack)]**

3/85 Test marketed in southern California - manufactured in Mexico - delivers 14 mg tar and 0.6 mg nicotine.

Discontinued.

**FLAIR 100**

2/70 Plain - 100 mm slim cigarette with 27 mm CA filter.

Discontinued.

**FLAIR MENTHOL 100**

2/70    Menthol - 100 mm slim cigarette with 27 mm CA filter.

Discontinued.

**HALLMARK KING SIZE [Hallmark 85]**

9/70    Plain - New cigarette designed to give uniform smoke deliveries from first puff to last puff - The cigarette paper is coated with sodium chlorate at evenly spaced intervals.

12/70    Discontinued.

**HALLMARK MENTHOL KING SIZE [Hallmark menthol 85]**

9/70    Menthol - New cigarette designed to give uniform smoke deliveries from first puff to last puff - The cigarette paper is coated with sodium chlorate at evenly spaced intervals.

12/70    Discontinued.

**HALLMARK 100**

7/76    Introduced - test market - packaged in a slide and shell box with an automatic top opening device and delivers 24 mg tar. Blend contains no reconstituted tobacco or expanded stems; filter contains modified ion exchange resin (Duolite).

Discontinued.

**HALLMARK MENTHOL 100**

8/76    Introduced - test market - a mentholated version of Hallmark 100 cigarettes. Delivers 23 mg tar.

Discontinued.

**KENTUCKY KING SIZE [Kentucky 85]**

5/60    Introduced, king size. "All tobacco filter."

3/61    Phosphate treated paper.

2/62    Increased TPM and nicotine deliveries achieved by slower static burning and increased alkaloids.

12/62    Discontinued.

**KIM SLIMS 100 (BOX) 25'S**

7/86    Test marketed in Hawaii and Nashville, Tennessee - delivers 9 mg tar and 0.7 mg nicotine - has a 94 mm length.

Discontinued.

**KIM SLIMS 100 MENTHOL (BOX) 25'S**

7/86    Test marketed in Hawaii and Nashville, Tennessee - delivers 9 mg tar, 0.7 mg nicotine and 0.5 mg smoke menthol - has a 94 mm length.

Discontinued.

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**KOOL LONG SIZE (BOX) [Kool 80 (Box)]**

5/74 Introduced in flip-top box - Similar to Kool 85.

Discontinued.

**KOOL KING SIZE (BOX) [Kool 83 (Box)]**

1/91 Filter Length increased (18.9 to 21.1 mm) - no difference in smoke deliveries from the 80 mm (Box) product already on the market.

**KOOL FILTERS CLASSIC MENTHOL KING SIZE (BOX)**

3/92 Packaging change - Kool Filters Classic test marketed in Virginia and Ohio - no changes in smoke deliveries or construction.

**KOOL KING SIZE [Kool 85]**

- 6/60 New filter, lower RTD.
- 6/61 Filter fiber denier and weight decreased, no change in filtration efficiency.
- 3/62 Filter length increased (17 to 20 mm); higher filter efficiency.
- 12/63 Carbowax (5%) observed in the filter.
- 2/64 Filler alkaloids increased resulting in higher nicotine delivery.
- 3/64 TPM (2 mg) and nicotine deliveries decreased as result of change in paper additive, phosphate to citrate.
- 12/64 Nicotine delivery decreased by decreasing filler alkaloids.
- 4/65 Filler alkaloids increased.
- 3/66 Fiber shape changed from I to Y.
- 6/66 TPM (1 mg) increased.
- 10/66 TPM (2 mg), nicotine (0.2 mg), and menthol in smoke (0.1 mg) decreased by increasing paper porosity.
- 8/67 TPM (2 mg) decreased as result of a blend change.
- 4/68 Filter length (20 to 21 mm) and tipping paper (24 to 25 mm) increased, no change in smoke deliveries.
- 7/68 Tar (1 mg) and nicotine (0.1 mg) were reduced correlating with a lower filler rod TPM.
- 1/69 Menthol in smoke and filler increased.
- 4/70 Reconstituted tobacco (8 to 12%) and RKS (11 and 15%) increased.
- 2/72 Addition of expanded RKS to blend replacing portion of regular RKS.

- 10/72 Tar (0.6 mg) and nicotine (0.05 mg) lower due to faster static burning time.
- 5/73 Reconstituted tobacco increased 11 to 15%.
- 7/73 Tipping paper length increased 25 to 26 mm - No other changes.
- 3/76 Menthol in smoke content increased by increasing filler menthol.
- 11/85 Higher CO (14 to 16 mg) - change to a less porous cigarette paper (14 to 20 sec.) with a higher level of paper component (0.2 to 0.7%).
- 11/91 Test marketed in Ohio and Virginia with slight changes in packaging and name change to "Classic Menthol."

**KOOL KING SIZE 25's [Kool 85 25's]**

- 11/85 Test market - similar to Kool 85 - eight packs in a carton for a total of 200 cigarettes.
- 9/86 Discontinued.

**KOOL INTERNATIONAL MENTHOL 95**

- 8/79 Test marketed - This brand is packaged in the princess pack. Tar (10 mg). Ventilation consists of 1 row of Laser perforated holes. This cigarette previously available only in foreign markets.
- Discontinued.

**KOOL MILDS LONG SIZE (BOX) [Kool Milds 80 (Box)]**

- 7/86 Distributed nationally - delivers 11 mg tar, 0.8 mg nicotine and 0.6 mg smoke menthol.
- Discontinued.

**KOOL MILDS KING SIZE (BOX) [Kool Milds 83 (Box)]**

- 1/91 Filter length increased (18.9 to 21.1 mm) - no difference in smoke deliveries from the 80 mm (Box) product already on the market.
- 11/91 Test marketed in Ohio and Virginia with slight changes in packaging and name change to Kool Filters Mild Menthol.

**KOOL MILDS KING SIZE [Kool Milds 85]**

- 4/72 Introduced - Tar (16.5 mg) and nicotine (1.4 mg) - Very similar to Kool 85 except for total alkaloids. Regular and expanded RKS in blend (11%).
- 7/72 Marketed nationally in July, 1972, with longer filter (21 to 25 mm) and increased tipping paper length (25 to 30 mm). Increase of regular and expanded RKS (11 to 18%). These changes resulted in lower tar (3 mg) and nicotine (0.3 mg).
- 5/73 Lower total alkaloids (0.3%) and nicotine delivery (0.2 mg).
- 8/74 Blend change - Lower alkaloids and filler rod TPM resulting in lower tar (2 mg) and nicotine (0.2 mg). Lower puff count and higher RTD noted.
- 10/78 The addition of expanded tobacco at the 6% level was observed. This change resulted in lower tobacco weight and rod density and an increase in total RTD.

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- 10/79 A lower tar (13 to 11 mg) achieved by introduction of filter ventilation (15%) and a change to a more porous cigarette paper. A blend change indicated by a high filler alkaloid content and lower reducing sugars.
- 3/81 Expanded tobacco eliminated (11 to 0%) - increase in tobacco weight.
- 7/81 Freon expanded tobacco has been added (11%) resulting in lower tobacco weight (0.692 to 0.670 g).
- 1/86 Higher CO delivery correlated with a less porous cigarette paper - longer tipping paper length.
- 11/91 Test marketed in Ohio and Virginia with slight changes in packaging and name change to Kool Filters Mild Menthol.

#### **KOOL MILDS 100**

- 8/79 Test marketed - A brand extension of Kool Milds 85. Tar (13 mg) and nicotine (1.2 mg) with 19% ventilation. Blend contains 7% expanded tobacco. Ventilation achieved by a band of electrostatic perforation.
- 3/81 Expanded tobacco eliminated (11 to 0%) - increase in tobacco weight.
- 7/81 Freon expanded tobacco has been added (11%) resulting in lower tobacco weight (0.884 to 0.829g).
- 1/86 Change to a less porous cigarette paper and an increased ventilation noted - no changes in smoke deliveries.
- 11/91 Test marketed in Ohio and Virginia with slight changes in packaging and name change to Kool Filters Mild Menthol. Shorter (27 vs. 30 mm), lighter (0.15 vs. 0.17 g) filter.
- 3/92 Filter length decreased (30 to 27 mm) resulting in lower rod density (0.23 to 0.22 g/cc).

#### **KOOL NATURALS KING SIZE [Kool Naturals 85]**

- 8/76 Introduced - test market - delivers 14 mg tar. Similar to Fact 85 and Vanguard 85 cigarettes. Filter containing Duolite granules described as an "Actron" filter.

Discontinued.

#### **KOOL 100**

- 9/67 100 mm mentholated cigarette with 22 mm CA filter.
- 8/68 Changes in blend, filter length (22 to 25 mm), and tipping paper (27 to 30 mm) did not alter smoke deliveries.
- 1/69 Menthol in smoke and filter increased.
- 2/72 Addition of expanded RKS to blend replacing portion of regular RKS.
- 2/73 Change in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) - Lower tar (1 mg) and nicotine (0.1 mg).
- 5/73 Reconstituted tobacco content increased (11 to 15%).

- 3/76     Menthol in smoke content increased by increasing filler menthol.
- 5/78     Lower tar (18 to 17 mg) resulting from decrease in filler rod TPM delivery. An increase in total RTD was also observed.
- 9/78     Level of reconstituted tobacco increased from 10 to 16% and level of expanded stems decreased from 17 to 14%.
- 12/78    Lower tar (16 to 15 mg) and nicotine (1.2 to 1.1 mg) deliveries resulting from a change to a more porous cigarette paper (22 to 12 sec.).
- 9/80     The addition of 8% expanded tobacco was noted - This change resulted in a lower tobacco weight and rod density.
- 11/85    Higher tar (14 to 16 mg) and nicotine (0.9 to 1.1 mg) deliveries - increased filler rod TPM, tobacco weight and total alkaloid content - higher smoke menthol (0.4 to 0.5 mg) due to increased menthol in the filler and filter.
- 11/91    Test marketed in Ohio and Virginia with slight changes in packaging and name change to "Classic Menthol."

#### **KOOL LIGHTS KING SIZE [Kool Lights 85]**

- 9/81     Name changed from Kool Super Lights 85. Ventilation system changed to two rows of mechanical perforation. These cigarettes are lower in tar (8.6 mg) because of a more efficient filter and higher ventilation level.
- 1/89     Test marketed in St. Louis, Missouri with new package graphics and white tipping. No changes were noted in smoke deliveries.
- 11/91    Test marketed in Ohio and Virginia with slight changes in packaging. Tipping paper changed from cork to white. Paper and filter changes.

#### **KOOL LIGHTS 100**

- 9/81     Name changed from Kool Super Lights 100. Ventilation system changed to two rows of mechanical perforation. These cigarettes are lower in tar (12.3 mg) because of a more efficient filter and higher ventilation level.
- 5/83     Tar (11 to 10 mg), nicotine (0.9 to 0.8 mg) and CO (10 to 8 mg) decreased due to increased ventilation (28 to 38%).
- 11/86    Change to a less porous cigarette paper (14 to 21 sec.) was observed - no changes in smoke deliveries.
- 7/87     Tar, nicotine and CO decreased as a result of increased ventilation and more porous cigarette paper.
- 1/89     Test marketed in St. Louis, Missouri with new package graphics and white tipping. No changes were noted in smoke deliveries.
- 11/91    Test marketed in Ohio and Virginia with slight changes in packaging. Tipping paper changed from cork to white; filter changes.

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**KOOL SUPER LIGHTS KING SIZE [Kool Super Lights 85]**

- 7/77 Introduced - 85 mm mentholated cigarette - low tar (9 mg) and nicotine (0.7 mg) resulted primarily from filter ventilation (25%) and low available TPM filler. Mechanically perforated cigarette paper. Typical Brown & Williamson blend. Tar (9 mg) and nicotine (0.8 mg) listed on pack.
- 7/79 Tar (9 to 6 mg) and nicotine (0.8 to 0.6 mg) deliveries were decreased by increasing the filter ventilation and lowering the tobacco weight. Lower tobacco weight result of addition of 6% expanded tobacco. Paper porosity changed from 7 to 13 sec. Data listed on pack as tar (7 mg) and nicotine (0.7 mg).

Discontinued.

**KOOL SUPER LIGHTS 100**

- 7/77 Introduced - 100 mm mentholated cigarette - low tar (9 mg) and nicotine (0.8 mg) achieved by filter ventilation (35%) and low available TPM filler. Typical Brown & Williamson blend. Tar (9 mg) and nicotine (0.8 mg) listed on pack.
- 11/80 Addition of 10% expanded tobacco resulted in a lower tobacco weight and rod density.
- 3/81 Expanded tobacco eliminated (10 to 0%) - increase in tobacco weight - tar and nicotine data printed on packs was removed.
- 4/81 Tar (8.1 to 9.4 mg), nicotine (0.65 to 0.72 mg) and CO (9.9 to 12.2 mg) increase - reduced filter ventilation (32 to 24%).

Discontinued.

**KOOL ULTRA KING SIZE [Kool Ultra 85]**

- 9/81 Introduced - test market - tar and nicotine deliveries advertised as 2 mg and 0.3 mg, respectively. The filter system is similar to that of the Barclay with mechanical perforation and four longitudinal grooves along the filter.
- 11/86 Filter changed from "Actron" filter (Barclay-type) to conventional cellulose acetate filter - higher total and filter RTD, lower ventilation and less porous cigarette paper were also noted. Higher smoke deliveries resulted from these changes. Higher smoke menthol correlated with increased filler and filter menthol.
- 7/87 Filter changed back to "Actron" (Barclay-type) filter.
- 1/89 Test marketed as Kool Ultra Lights in St. Louis, Missouri with new package graphics and white tipping. No changes were noted in the filter design or smoke deliveries.
- 11/91 Test marketed in Ohio and Virginia as Kool Ultra Lights. Significant changes include packaging, tipping paper color (cork to white), higher menthol, and filter construction including the absence of channels.

**KOOL ULTRA 100**

- 9/81 Introduced - test market - tar and nicotine deliveries are 5.7 mg and 0.53 mg, respectively. The filter system is similar to that of the Barclay with mechanical perforation and four longitudinal grooves along the filter.

- 11/86 Filter changed from "Actron" filter (Barclay-type) to conventional cellulose acetate filter - higher total and filter RTD, lower ventilation and less porous cigarette paper were also noted. Higher smoke deliveries resulted from these changes. A longer filter length was observed.
- 7/87 Filter changed back to "Actron" (Barclay-type) filter.
- 1/89 Test marketed as Kool Ultra Lights in St. Louis, Missouri with new package graphics and white tipping. No changes were noted in the filter design or smoke deliveries.
- 11/91 Test marketed in Ohio and Virginia as Kool Ultra Lights. Significant changes include packaging, tipping paper color (cork to white), higher menthol, and filter construction including the absence of channels. Lower tar (5 vs 9 mg).

**KOOL DELUXE LIGHTS KING SIZE (BOX) [Kool Deluxe Lights 83 (Box)]**

- 7/90 Test marketed in Hawaii - delivers 10 mg tar, 0.9 mg nicotine, and 0.5 mg smoke menthol.

**KOOL DELUXE LIGHTS 100 (BOX)**

- 7/90 Test marketed in Hawaii - delivers 10 mg tar, 0.9 mg nicotine, and 0.5 mg smoke menthol.

**KOOL DELUXE ULTRA LIGHTS KING SIZE (BOX) [Kool Deluxe Ultra Lights 83 (Box)]**

- 7/90 Test marketed in Hawaii - delivers 6 mg tar, 0.6 mg nicotine, and 0.4 mg smoke menthol.

**KOOL DELUXE ULTRA LIGHTS 100 (BOX)**

- 7/90 Test marketed in Hawaii - delivers 6 mg tar, 0.6 mg nicotine, and 0.4 mg smoke menthol.

**LIFE KING SIZE [Life 85]**

- 2/66 TPM (7 mg) and nicotine (0.5 mg) increased by decrease in filter efficiency - Filter changed from 25 mm paper to 25 mm CA.
- 12/66 TPM (5 mg) and nicotine (0.3 mg) decreased as a result of increase in filter efficiency. Filter changed from 25 mm CA to dual filter 12.5 mm CA and 12.5 mm paper.
- 2/67 TPM (2 mg) decreased as result of increased filter efficiency - Filter changed to an 18 mm/7 mm (paper/CA).
- 3/67 TPM (4 mg) and nicotine (0.2 mg) increased as result of a change in filter construction 12.5/12.5 mm (paper/CA) which resulted in decrease in filter efficiency.

Discontinued.

**LIFE FILTER 100**

- 6/70 Lowest tar delivery of any 100 mm - Dual filter, paper inner plug, and cellulose acetate outer plug - Tar (10 mg) and nicotine (0.8 mg) data are listed on pack.
- 8/73 Filter changed from 25 mm dual (paper/CA) to 27 mm CA. Total and filter RTD increased.

Discontinued.

**LYME KING SIZE [Lyme 85]**

- 10/71 New flavor - lime-menthol product - Tar (14 mg) and nicotine (0.9 mg) low for B & W product.  
Discontinued.

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**PHOENIX 120**

7/75 Plain - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper containing azo dyes - Circumference 21 mm - Tar (19 mg) and nicotine (1.4 mg) deliveries.

Discontinued.

**PHOENIX MENTHOL 120**

7/75 Menthol - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper containing azo dyes - Circumference 21 mm - Tar (19 mg) and nicotine (1.4 mg) deliveries.

Discontinued.

**PRINCE KING SIZE [Prince 85]**

11/88 Imported by Brown & Williamson from Denmark - manufactured by Scandinavian Tobacco International - delivers 16 mg tar and 1.3 mg nicotine. A high level of expanded stem (24%) was in the blend.

**PRINCE LIGHTS KING SIZE [Prince Lights 85]**

11/88 Imported by Brown & Williamson from Denmark - manufactured by Scandinavian Tobacco International - delivers 12 mg tar and 1.0 mg nicotine. A high level of expanded stem (24%) was in the blend.

**RALEIGH REGULAR (FILTER) [Raleigh 70 (Filter)]**

3/85 Test marketed in southern California - manufactured in Mexico - delivers 16 mg tar and 0.8 mg nicotine.

Discontinued.

**RALEIGH EXTRA KING SIZE (NONFILTER)**

7/91 National distribution - 24 mg tar, 1.3 mg nicotine; blend contains 18% reconstituted tobacco and 3% expanded stem.

**RALEIGH EXTRA KING SIZE [Raleigh Extra 85]**

1/91 Distributed in North Carolina - 17 mg tar and 1.0 mg nicotine, sold at generic prices. Cigarette paper utilizes wood pulp.

**RALEIGH EXTRA 100**

9/90 Marketed in New York - delivers 15 mg tar and 1 mg nicotine, will sell for generic prices - the cigarette paper is 100% wood pulp.

**RALEIGH EXTRA LIGHTS KING SIZE [Raleigh Extra Lights 85]**

1/91 Distributed in North Carolina - 12 mg tar and 0.8 mg nicotine, sold at generic prices. Cigarette paper utilizes wood pulp.

**RALEIGH EXTRA LIGHTS 100**

9/90 Marketed in New York - delivers 12 mg tar and 0.8 mg nicotine, will sell for generic prices - the cigarette paper is 100% wood pulp.

**RALEIGH EXTRA LIGHTS MENTHOL KING SIZE [Raleigh Extra Lights Men. 85]**

1/91 Distributed in North Carolina - 11 mg tar, 0.7 mg nicotine, and 0.4 mg smoke menthol - sold at generic prices. Cigarette paper utilizes wood pulp.

**RALEIGH EXTRA LIGHTS MENTHOL 100**

9/90 Marketed in New York - delivers 9 mg tar, 0.7 mg nicotine - and 0.2 mg smoke menthol - will sell for generic price the cigarette paper is 100% wood pulp.

**RALEIGH EXTRA ULTRA LIGHTS KING SIZE [Raleigh Extra Ultra Lights 85]**

5/91 Nationally distributed - delivers 6 mg tar and 0.4 mg nicotine, sold at sub-generic prices.

**RALEIGH FILTER KING SIZE [Raleigh Filter 85]**

4/61 Lighter filter with same efficiency.

12/63 Carbowax (5%) observed in the filter.

1/64 Filler alkaloids increased resulting in higher nicotine delivery.

6/64 TPM (4 mg) and nicotine (0.2 mg) decreased as result of change in paper component, phosphate to citrate.

3/66 Fiber shape changed from I to Y.

6/66 TPM (2 mg) increased.

2/67 TPM (2 mg) decreased, paper porosity increased and cigarette length decreased.

3/67 Reconstituted tobacco increased, 6 to 9%.

4/68 Tar (1 mg) reduced by changes to a more porous paper and in tipping paper (24 to 25 mm).

7/68 Filter length increased (20 to 21 mm).

9/68 Reconstituted material increased, 5 to 9%.

1/69 Paper porosity changed (11 to 17 sec.) - No change in tar.

8/69 Tar (2 mg) and nicotine (0.2 mg) decreased, lower alkaloids and tobacco weight observed.

10/69 RKS increased (7 to 18%).

3/72 Addition of expanded RKS to blend replacing portion of regular RKS.

7/73 Tipping paper length increased 25 to 26 mm - No other changes.

3/81 Expanded tobacco eliminated (10 to 0%) - increase in tobacco weight - tar and nicotine data printed on pack has been removed.

11/83 Tobacco weight decreased (0.778 to 0.732 g) due to addition of 4% Freon expanded tobacco to the blend.

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1/85 Tar (13.6 to 13.1 mg) and CO (16.5 to 13.8 mg) decreased - change to a more porous cigarette paper (23 to 12 sec.).

7/85 Increased expanded tobacco (4 to 10%) - decreased tobacco weight.

#### **RALEIGH LIGHTS KING SIZE [Raleigh Lights 85]**

4/73 Introduced - 85 mm version of Raleigh 85 with lower tar (13 mg) and nicotine (0.9 mg). It has 25 mm CA filter and 30 mm tipping paper.

10/76 Brand name changed from Raleigh Extra Milds 85 to Raleigh Lights 85. No other changes were noted.

4/78 Decrease in tar delivery (12 to 10 mg) resulting from introduction of filter ventilation (24%) and a change to a more efficient filter. Changed to a high alkaloid blend and replaced mechanically perforated cigarette paper with inherently porous paper.

3/79 Tar (9 to 8 mg) and nicotine (0.9 to 0.8 mg) deliveries lower correlating with a lower filler rod TPM.

5/83 12% Freon expanded tobacco added to blend.

9/85 Increased amount of reconstituted material and decreased amount of expanded stems - changed to a less porous cigarette paper.

3/86 Tipping paper length increased - lower tar and nicotine deliveries and a lower puff count resulted.

1/88 Expanded tobacco removed from the blend resulting in an increased tobacco weight and rod density.

#### **RALEIGH LIGHTS 100**

8/78 Introduced - 100 mm version of Raleigh Lights 85 with 10 mg tar and 0.9 mg nicotine. 27 mm CA filter with 24% ventilation.

2/81 Tar (7.8 to 9.8 mg), nicotine (0.68 to 0.81 mg) and CO (10.7 to 14.4 mg) increased - decrease in filter ventilation (34 to 19%) - higher RTD (4.9 to 5.6).

5/83 Tar (10 to 9 mg), nicotine (0.9 to 0.8 mg) and CO (13 to 11 mg) decreased due to increased ventilation (26 to 32%).

1/84 12% Freon expanded tobacco added to blend resulting in lower tobacco weight (0.892 to .826 g/cc) and rod density (0.251 to 0.230 g/cc). Fiber denier changed (2.6/Y to 3.2/Y) resulting in lower filter RTD (4.1 to 3.3 in. H<sub>2</sub>O) Decrease in filtration efficiency (59 to 52%). Tar increased (9 to 10 mg).

9/85 Increased amount of reconstituted material and decreased amount of expanded stems - more efficient filter used.

11/85 Tar (9 to 11 mg) nicotine (0.7 to 0.8 mg) and CO (11 to 13 mg) increased - decreased ventilation (27 to 20%).

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- 1/88 Expanded tobacco removed from the blend. Higher tar, nicotine and CO deliveries resulted; longer filter length was observed (27 to 30 mm).

### **RALEIGH 100**

- 8/69 100 mm cigarette with 25 mm CA filter.
- 9/69 Coupon on pack.
- 3/71 Tar (1 mg) increased correlating with a change in paper porosity (13 to 25 sec.).
- 3/72 Addition of expanded RKS to blend replacing a portion of regular RKS.
- 5/72 Tar (1.5 mg) and nicotine (0.1 mg) lower - Lower tobacco weight and rod density noted.
- 12/72 Change in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) - Tar (1 mg) and nicotine (0.1 mg) decreased.
- 5/78 Lower tar (17 to 16 mg) resulting from decrease in filler rod TPM delivery.
- 4/79 Addition of expanded tobacco at the 6% level correlating with a lower tobacco weight and rod density. Lower tar (17 to 16 mg) and filler rod TPM deliveries noted.
- 1/80 Lower tar (16 to 15 mg) and nicotine (1.2 to 1.1 mg) resulting from a change to a more porous cigarette paper.
- 2/81 Tar (7.8 to 9.8 mg), nicotine (0.68 to 0.81 mg) and CO (10.7 to 14.4 mg) increased - decrease in filter ventilation (34 to 19%) - higher RTD (4.9 to 5.6).
- 3/81 Expanded tobacco eliminated (10 to 0%) - increase in tobacco weight - tar and nicotine data printed on pack has been removed.
- 1/84 4% Freon expanded tobacco added to blend resulted in lower tobacco weight (0.886 to 0.831 g) and rod density (0.250 to 0.233 g/cc).

### **RICHLAND KING SIZE 25's [Richland 85 25's]**

- 9/83 Introduced - contains 25 cigarettes per pack - delivers 15 mg tar and 1.2 mg nicotine - similar to Viceroy 85.
- 6/85 National distribution.

### **RICHLAND LIGHTS KING SIZE 25's [Richland Lights 85 25's]**

- 5/85 Introduced - contains 25 cigarettes per pack - delivers 11 mg tar and 0.8 mg nicotine.
- 6/85 National distribution.
- 5/87 Expanded stems removed from the blend (11% to none) - increased tobacco weight and rod density - higher filler rod TPM correlated with this change.

### **RICHLAND MENTHOL KING SIZE 25's [Richland Menthol 85 25's]**

- 9/83 Introduced - contains 25 cigarettes per pack - delivers 15 mg tar, 1.1 mg nicotine, and 0.5 mg menthol - similar to Kool 85.
- 6/85 National distribution.

- 3/86 Higher CO delivery resulted from less porous cigarette paper with an increased level of paper component.

**RICHLAND 100 25'S**

- 5/86 Introduced nationally - 250 cigarettes per carton - delivers 16 mg tar and 1.1 mg nicotine.

**RICHLAND LIGHTS 100 25'S**

- 5/86 Introduced nationally - 250 cigarettes per carton - delivers 11 mg tar and 0.8 mg nicotine.

**ST. JAMES COURT KING SIZE [ST. James Court 85]**

- 11/84 Introduced in Portland, Oregon; New Orleans, Louisiana; and Phoenix, Arizona - utilizes a dual cellulose acetate filter which consists of a 7 mm formed Filtrona section and a 20 mm "Actron" section - the Actron section contains a 20 mm cellulose acetate tube - the blend is not typical of Brown & Williamson products.

- 6/85 Test market expanded to Hawaii.

Discontinued

**ST. JAMES COURT MENTHOL KING SIZE [ST. James Court Menthol 85]**

- 11/84 Introduced in Portland, Oregon; New Orleans, Louisiana, and Phoenix, Arizona - utilizes a dual cellulose acetate filter which consists of a 7 mm formed Filtrona section and a 20 mm "Actron" section - the "Actron" section contains a 20 mm cellulose acetate tube - the blend is similar to Kool Lights.

- 6/85 Test market expanded to Hawaii.

Discontinued

**ST. JAMES COURT 100 (BOX)**

- 11/84 Introduced in Portland, Oregon; New Orleans, Louisiana; and Phoenix, Arizona - utilizes a dual cellulose acetate filter with a 7 mm formed Filtrona section and a 20 mm "Actron" section - the "Actron" section contains a 20 mm cellulose acetate tube - the blend is not typical of Brown & Williamson products.

- 6/85 Test market expanded to Hawaii.

Discontinued

**ST. JAMES COURT MENTHOL 100 (BOX)**

- 11/84 Introduced in Portland, Oregon; New Orleans, Louisiana; and Phoenix, Arizona - utilizes a dual cellulose acetate filter with a 7 mm formed Filtrona section and a 20 mm Actron section - the "Actron" section contains a 20 mm cellulose acetate tube - the blend is similar to Kool Lights.

- 6/85 Test market expanded to Hawaii.

Discontinued

**SEVENTY REGULAR [Seventy 70]**

- 6/76 Plain - test marketed with mechanically perforated cigarette paper and 17 mm CA filter - 10 mg tar and 0.7 mg nicotine.

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Discontinued.

**SEVENTY MENTHOL REGULAR [Seventy Menthol 70]**

6/76 Menthol - test marketed with mechanically perforated cigarette paper and 17 mm CA filter - 10 mg tar and 0.7 mg nicotine.

Discontinued.

**SPIRIT KING SIZE [Spirit 85]**

10/78 Test marketed - 85 mm cigarette delivering 8 mg tar and 0.9 mg nicotine - This new brand has a high efficiency, 25 mm CA filter with 30% ventilation.

Discontinued.

**SPIRIT 100**

10/78 Test marketed - 100 mm cigarette delivering 9 mg tar and 1.0 mg nicotine - This new brand has a high efficiency, 27 mm CA filter with 27% ventilation.

Discontinued.

**SUEDES 120**

9/75 Plain - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper colored with azo dyes - Tar (17 mg) and nicotine (1.2 mg) deliveries - Circumference 21 mm.

Discontinued.

**SUEDES MENTHOL 120**

9/75 Menthol - Introduced 120 mm cigarette with 30 mm CA filter with a brown cigarette paper colored with azo dyes - Tar (19 mg) and nicotine (1.3 mg) deliveries - Circumference 21 mm.

Discontinued.

**TRAMPS KING SIZE [Tramps 85]**

9/74 Plain - Introduced - Light brown cigarette paper colored with caramelized sugar. Tar (19 mg) and nicotine (1.1 mg) deliveries.

10/74 Introduced with regular cigarette paper. Lower tar and nicotine deliveries than previous sample.

4/75 Tar (19 to 16 mg) and nicotine (1.3 to 1.1 mg) decreased. Filler rod TPM decreased (36 to 31 mg). Smoke deliveries change as result of paper change.

12/75 Discontinued.

**TRAMPS MENTHOL KING SIZE [Tramps Menthol 85]**

9/74 Menthol - Introduced - Light brown cigarette paper colored with caramelized sugar. Tar (19 mg) and nicotine (1.1 mg) deliveries.

10/74 Introduced with regular cigarette paper. Lower tar and nicotine deliveries than previous sample.

4/75 Tar (19 to 17 mg) and nicotine (1.1 to 1.0 mg) decreased. Smoke deliveries change as result of paper change.

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12/75 Discontinued.

#### **TRAMPS 110**

4/75 Introduced plain 110 mm cigarette with light brown cigarette paper colored with caramelized sugar. Circumference 24.6 mm, 30 mm CA filter, and 35 mm tipping paper.

12/75 Discontinued.

#### **TRAMPS MENTHOL 110**

4/75 Introduced menthol 110 mm cigarette with light brown cigarette paper colored with caramelized sugar. Circumference 24.6 mm, 30 mm CA filter, and 35 mm tipping paper.

Discontinued.

#### **VANGUARD KING SIZE [Vanguard 85]**

8/75 Introduced - Similar to Fact 85 cigarettes previously introduced - CA filter with pocket in the middle containing yellowish granules identified as Duolite - Tar (14 mg) and nicotine (1.0 mg) deliveries.

Discontinued.

#### **VANGUARD MENTHOL KING SIZE [Vanguard Menthol 85]**

7/76 Introduced - test market - mentholated version of Vanguard 85 - Delivers 14 mg tar.

Discontinued.

#### **VICEROY KING SIZE (BOX) [Viceroy 83 (Box)]**

1/91 National distribution - 17 mg tar and 1.1 mg nicotine - sold at generic prices. Cigarette paper utilizes wood pulp.

#### **VICEROY KING SIZE [Viceroy 85]**

8/60 "Deep Weave," more efficient filter.

6/61 Lighter, slightly less efficient filter resulted in slight increase in TPM and nicotine delivery. 6/61

8/62 Total RTD reduced 20 mm H<sub>2</sub>O by changes in plug RTD, rod circumference, tobacco weight, and paper porosity.

5/63 Filter contains carbowax (5%).

8/63 Filter length has increased from 17 to 20 mm.

1/64 Filler alkaloids increased resulting in a higher nicotine delivery.

2/64 TPM (3 mg) and nicotine deliveries decreased, a result of a more porous cigarette paper.

6/66 TPM (2 mg) increased.

8/67 TPM (2 mg) decreased as result of blend change.

4/68 TPM (1 mg) reduced by changes to a more porous paper and in tipping paper (24 to 25 mm).

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- 9/68 Reconstituted material increased, 6 to 9%.
- 5/69 Tar increased (1 mg) - Change in paper porosity (11 to 18 sec.) noted.
- 7/69 Tar (1 mg) and nicotine (0.1 mg) decreased, amount of paper component in cigarette paper increased.
- 10/69 RKS increased (11 to 14%).
- 10/70 RKS increased (13 to 18%).
- 3/72 Addition of expanded RKS to blend replacing portion of regular RKS.
- 7/73 Tipping paper length increased 25 to 26 mm - No other changes.
- 6/75 Package design change - Tar (15 to 17 mg) and nicotine (1.0 to 1.1 mg) deliveries increased. Blend change observed.
- 10/75 Tar (15.0 mg) and nicotine (1.0 mg) deliveries returned to level prior to package design change.
- 3/78 Lower tar (16 to 14 mg) and nicotine (1.1 to 1.0 mg) deliveries achieved by change to a more efficient filter. Changes in total and filter RTD and filter fiber denier also noted.
- 9/78 Addition of expanded tobacco at the 6% level was observed. First time a Brown & Williamson product containing expanded tobacco was obtained from the market. Decrease in tobacco weight along with lower tar (14 to 13 mg) and nicotine (1.0 to 1.9 mg) deliveries resulting from the addition of expanded tobacco.
- 3/83 Tar increased (13.8 to 14.7 mg) due to decreased filtration efficiency (48 to 40%) and change in fiber denier (3.0 to 3.7).
- 1/85 Tar (15.5 to 14.2 mg) and CO (16.0 to 14.2 mg) decreased - change to a more porous cigarette paper (23 to 12 sec.).
- 1/89 Blend change resulted in lower level of expanded stems (13 to 5%) - dark colored reconstituted tobacco was replaced with a light colored reconstituted tobacco. The blend change increased tobacco weight. Higher smoke deliveries and a less porous cigarette paper were noted. Ventilation was added (None to 10%). This cigarette is now being sold at a generic price.

**VICEROY EXTRA MILD KING SIZE [Viceroy Extra Mild 85]**

- 4/74 Introduced - Very similar to Viceroy Lights 85 previously test marketed by Brown & Williamson.
- 1/77 Tar (14 to 11 mg) and nicotine (1.0 to 0.8 mg) decreased by the introduction of Hauni ventilation at the 23% level. A decrease in total RTD was also noted.
- 4/78 Blend change resulting in higher filler rod TPM delivery. Changed to a more efficient filter and discontinued use of mechanically perforated cigarette paper. No change in tar or nicotine deliveries observed. Changed from Hauni ventilation to mechanically perforated tipping paper.
- 12/78 Discontinued.



**VICEROY RICH LIGHTS KING SIZE [Viceroy Rich Lights 85]**

- 8/78 Introduced - Tar (9 mg) and nicotine (0.8 mg) with a 25 mm CA filter and 36% ventilation. Similar to Viceroy Extra Milds 85 cigarettes.
- 5/83 12% Freon expanded tobacco added to blend.
- 7/85 Name changed to Viceroy Lights.

**VICEROY LIGHTS KING SIZE (BOX) [Viceroy Lights 83 (Box)]**

- 1/91 National distribution - 12 mg tar and 0.8 mg nicotine - sold at generic prices. Cigarette paper utilizes wood pulp.

**VICEROY LIGHTS KING SIZE [Viceroy Lights 85]**

- 7/85 Introduced - Tar (12.5 mg) and nicotine (1.0 mg), 25 mm CA filter - 30 mm tipping paper - Blend contains expanded RKS.
- 9/85 Increased level of reconstituted material and decreased level of expanded stems - changed to a less porous cigarette paper.
- 5/86 Tipping paper length increased.
- 9/85 Increased level of reconstituted material and decreased level of expanded stems - changed to a less porous cigarette paper.
- 5/87 Expanded stems removed from the blend (11% to none) - increased tobacco weight and rod density - higher filler rod TPM correlated with this change.

**VICEROY 100**

- 10/67 100 mm cigarette with 22 mm CA filter.
- 8/68 Tar (2 mg) and nicotine (0.1 mg) reduced by changes in filter length (22 to 25 mm), tipping paper (27 to 30 mm) and to a more porous paper (20 to 12 sec.).
- 5/69 Tar (1 mg) increased. Change in paper porosity (11 to 20 sec.) noted.
- 6/69 Tar (2 mg) and nicotine (0.2 mg) decreased, change in paper porosity (21 to 14 sec.).
- 10/69 RKS increased (11 to 14%).
- 9/70 Tar (2 mg) and nicotine (0.1 mg) were reduced correlating to lower filler rod TPM - A decrease in alkaloids and higher reducing sugars were observed - An increase in RKS was noted.
- 10/70 RKS increased (13 to 18%).
- 3/71 Tar (1 mg) increased correlating with change in paper porosity (12 to 22 sec.).
- 3/72 Addition of expanded RKS to blend replacing portion of regular RKS.
- 12/72 Change in filter length (25 to 27 mm) and tipping paper length (30 to 32 mm) - Tar (2 mg) and nicotine (0.2 mg) decreased.
- 6/75 Package design change. Tar (16 to 17 mg) and nicotine (1.1 to 1.2 mg) deliveries increased. Blend change observed.

- 11/77 Decrease in tar (18 to 16 mg) and nicotine (1.3 to 1.1 mg) deliveries resulting from a change to a more porous cigarette paper.
- 5/80 Addition of expanded tobacco at the 7% level correlated with lower tobacco weight and rod density.
- 3/84 Tar (14 to 16 mg), nicotine (1.0 to 1.1 mg), filler rod TPM (27 to 29 mg) and total alkaloids (1.60 to 1.72%) increased. 9% ventilation added to brand - CO decreased (16 to 14 mg).
- 1/89 Blend change resulted in lower level of expanded stems (13 to 5%) - dark colored reconstituted tobacco was replaced with a light colored reconstituted tobacco. The blend change increased the tobacco weight. Higher smoke deliveries and a less porous paper were noted. Ventilation increased (8 to 17%). This cigarette is now being sold at a generic price.

#### **VICEROY 100 (BOX)**

- 7/91 Test marketed - 17 mg tar, 1.2 mg nicotine with a 27 mm CA filter, cork tipping paper and 12% ventilation; blend contains 12% reconstituted tobacco, 7% expanded stem and 11% expanded tobacco.

#### **VICEROY RICH LIGHTS 100**

- 9/78 Introduced - 100 mm cigarette delivering 8 mg tar and 0.8 mg nicotine. 27 mm CA filter with 40% ventilation. This is a brand extension of Viceroy Rich Lights 85 cigarettes.
- 5/82 Tar value (8 to 9 mg) changed on pack to comply with FTC Report.
- 5/83 12% Freon expanded tobacco added to blend.
- 9/84 Tar (11.5 to 10.2 mg) and CO (11.2 to 9.6 mg) decreased - ventilation increased (20 to 29%).
- 3/85 Tar (10.2 to 11.6 mg) and CO (9.6 to 11.4 mg) increased - decreased ventilation (29 to 21%).
- 7/85 Name changed to Viceroy Lights.

#### **VICEROY LIGHTS 100**

- 7/85 Introduced nationally - Tar (11 mg) and nicotine (0.9 mg), 27 mm CA filter - 36 mm tipping paper - blend contains expanded RKS.
- 9/85 Increased level of reconstituted material and decreased level of expanded stems - more efficient filter.
- 3/86 Filter length increased - lower tobacco weight resulted - change in fiber denier - no changes in smoke deliveries.
- 1/88 Expanded tobacco removed from the blend resulting in an increased tobacco weight and rod density.

#### **VICEROY LIGHTS 100 (BOX)**

- 7/91 Test marketed - 12 mg tar, 0.9 mg nicotine with a 27 mm CA filter, cork tipping paper and 15% ventilation; blend contains 16% reconstituted tobacco and 5% expanded stems.

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**WINGS FILTER KING SIZE [Wings Filter 85]**

3/67 85 mm cigarette - 20 mm CA filter - contains 25% reconstituted material.

12/68 Discontinued.

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### ADAM KING SIZE [Adam 85]

- 7/71 Introduced with 20 mm CA filter - Brown colored cigarette paper - paper colored with caramelized sugar.
- 10/72 Paper component in cigarette paper changed from citrate to phosphate - Tar (3 mg) and nicotine (0.3 mg) deliveries increased by this change. Package also redesigned.
- Discontinued

### ADAM 100

- 10/72 100 mm version of the 85 mm cigarette previously introduced - 25 mm CA filter.
- Discontinued

### CHESTERFIELD 70 (NF)

- 10/62 Paper porosity increased reducing TPM by 4 mg and nicotine delivery by 0.1 mg.
- 12/62 Alkaloids reduced by 0.1%.
- 2/81 Tar (22.7 to 19.4 mg), nicotine (1.36 to 1.14 mg) and CO (12.9 to 11.0 mg) reduced - change to more porous cigarette paper (22 to 14 sec.).
- 1/84 Tar (19 to 18 mg) decreased due to use of perforated porous cigarette paper (7 sec.) with higher level of paper component (0.3 to 1.7%).

### CHESTERFIELD KING SIZE (NF) [Chesterfield 85 (NF)]

- 10/62 Paper porosity increased, reducing TPM by 8 mg and nicotine delivery 0.3 mg.
- 8/65 RTD increased (3.6 to 3.9 inches of H<sub>2</sub>O).
- 12/65 TPM (2 mg) and nicotine (0.1 mg) deliveries increased.
- 5/67 Circumference reduced, resulting in lower tobacco weight.
- 2/68 Tar (3 mg) reduced by changes in type paper component, phosphate to citrate.
- 4/69 Coupon added to pack.
- 9/71 Tar (2 mg) and nicotine (0.1 mg) decreased - Reconstituted tobacco increased (6 to 11%) and RKS added to blend (4%).

### CHESTERFIELD KING SIZE (NF) (cont.) [Chesterfield 85 (NF)]

- 3/72 Addition of expanded RKS to blend replacing a portion of regular RKS.
- 6/73 Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.
- 9/76 Expanded stem level increased from 4 to 10%.

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- 1/81 Tar (24.8 to 23.7 mg), nicotine (1.59 to 1.45 mg) and CO (16.0 to 13.5 mg) reduced - change to a more porous cigarette paper (22 to 13 sec.).
- 11/83 Tar (23.0 to 20.2 mg) and CO (15.4 to 12.4 mg) decreased due to use of perforated cigarette paper that is more porous (14 to 7 sec.) with higher level of paper component (0.4 to 1.4%).
- 5/84 Tar (20 to 22 mg) and CO (12 to 16 mg) increased due to a change to a less porous paper (7 to 15 sec.) with decreased level of paper component (1.4 to 0.4%).

**CHESTERFIELD LIGHTS KING SIZE [Chesterfield Lights 85]**

- 11/88 Test marketed in St. Louis, Missouri and Peoria, Illinois - delivers 10 mg tar and 0.8 mg nicotine.

**CHESTERFIELD LIGHTS 100**

- 11/88 Test marketed in St. Louis, Missouri and Peoria, Illinois - delivers 10 mg tar and 0.8 mg nicotine.

**CHESTERFIELD 101**

- 8/67 Test marketed - 101 mm long cigarettes with 20 mm CA filter.
- 2/68 Tar (2 mg) reduced by increase in tipping paper (24 to 27 mm).
- 7/68 Tar (3 mg) reduced by changes in blend and to a more porous paper (20 to 11 sec.).
- 4/69 Coupon added to pack.
- 10/69 Reconstituted tobacco removed from blend (20 to 0%) - RKS increased (5 to 11%).
- 6/70 Reconstituted tobacco added to blend (0 to 19%) - RKS lowered (11 to 6%) - Tar (3 mg) and nicotine (0.2 mg) decreased.
- 3/72 Addition of expanded RKS to blend replacing a portion of regular RKS.
- 7/72 Filter length (20 to 25 mm) and tipping paper (27 to 30 mm) increased. Fiber denier change - No change in smoke deliveries.
- 6/73 Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.
- 10/74 Package changed to be similar to package of Chesterfield nonfilter.
- 3/75 Fiber shape changed (Y to I).
- 1/76 Tar (1 mg) lowered by increasing filter and tipping paper lengths. Fiber denier changed from 4.5 to 3.5.
- 9/76 Brand name changed from Chesterfield 101 to Chesterfield Filter Longs; cigarette length decreased (100.5 to 98.6 mm). Lower tar (1 mg) and nicotine (0.2 mg) deliveries were noted. Expanded stem level increased from 4 to 10%.
- 11/76 Brand name changed back to Chesterfield 101. Cigarette length and smoke deliveries returned to previous level.

- 8/81 An increase in the filter length (27 to 30 mm) and tipping paper length (32 to 35 mm) resulted in lower tar (15.3 to 14.1 mg), nicotine (1.10 to 1.04 mg), and CO (16.6 to 15.5 mg) deliveries.

Discontinued

**CHESTERFIELD FILTER KING SIZE [Chesterfield Filter 85]**

- 4/66 Introduced - King size soft pack - slow burning rate resulting in high TPM and nicotine deliveries.
- 4/69 Coupon added to pack.
- 1/75 Package changed - Similar to Chesterfield nonfilter.
- 7/78 Lower tar (18 to 14 mg) and nicotine (1.1 to 1.0 mg) deliveries resulting from a change to a more porous cigarette paper and a decrease in tobacco weight.
- 9/83 Tar (14 to 12 mg), nicotine (1.0 to 0.9 mg), and CO (14 to 12 mg) decreased due to increased filter length (21 to 25 mm) and tipping paper length (26 to 30 mm).

Discontinued

**CHESTERFIELD MENTHOL FILTER KING SIZE [Chesterfield Men. Filter 85]**

- 4/66 Introduced - king size in soft pack - slow burning rate resulting in high TPM and menthol deliveries.
- 3/67 TPM (3 mg), nicotine (0.1 mg), and menthol in smoke (0.1 mg) decreased as result of changes in cigarette paper and filter efficiency.
- 4/69 Coupon added to pack.
- 6/70 Addition of reconstituted tobacco (0 to 19%), RKS decreased (15 to 3%) - Tar (3 mg) and nicotine (0.1 mg) decreased.
- 12/74 Discontinued

**DECADE KING SIZE [Decade 85]**

- 10/76 Introduced - Test market - Lower tar (6 mg) and nicotine (0.5 mg) deliveries achieved by filter ventilation. Filter contains a 14 mm polyethylene tube insert similar to the one used on L & M Flavor Lights 85.
- 10/80 Filter changed by removing polyethylene tube insert resulted in lower filter ventilation and higher filter RTD. No change in smoke deliveries.

Discontinued

**DECADE MENTHOL KING SIZE [Decade Menthol 85]**

- 3/77 Introduced - low tar (6 mg) and nicotine (0.5 mg) achieved by high filter ventilation (59%). Has same filter and blend as Decade 85 cigarettes. Tar (5 mg) and nicotine (0.5 mg) listed on pack.
- 10/80 Filter changed by removing polyethylene tube insert resulted in lower filter ventilation and higher filter RTD. No change in smoke deliveries.

Discontinued.

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**DECADE 100**

8/78 Introduced - 100 mm cigarette - 5 mg tar and 0.4 mg nicotine with a 27 mm CA filter and 65% ventilation. High level of citrate on the cigarette paper. Filter contains a polyethylene tube insert which is similar in construction to filters used on Decade 85 and L & M Lights 85 and 100 cigarettes.

Discontinued.

**DEVON KING SIZE [Devon 85]**

5/64 Introduced - King size mentholated cigarette with "Lark-type" filter - Filter has gas phase activity.

12/65 Discontinued.

**DORADO KING SIZE [Dorado 85]**

7/83 Test market - New Mexico - delivers 14 mg tar and 1 mg nicotine.

Discontinued.

**DUKE KING SIZE [Duke 85]**

2/60 Bright cellulose acetate filter.

4/60 "Reduced Draw" filter with 1.5 denier fibers.

5/62 "Reduced Draw" filter with 2.5 denier fibers.

10/62 Contains filler with a marked reduction in alkaloids; alkaloids by 0.7%; nicotine delivery by 0.5mg.

5/64 Introduction of "Lark-type" filter and mechanically porous paper - reduced TPM and nicotine deliveries. Filter has gas phase activity.

4/65 TPM and nicotine deliveries increased - RTD decreased.

**EAGLE KING SIZE [Eagle 85]**

1/76 Plain - test marketed - similar to L & M 85 cigarettes. Sell for \$.05 less per pack than any other 85 mm product.

Discontinued.

**EAGLE MENTHOL KING SIZE [Eagle Menthol 85]**

1/76 Menthol - test marketed - similar to L & M 85 cigarettes. Sell for \$.05 less per pack than any other 85 mm product.

Discontinued.

**EVE LIGHT 100**

8/78 Introduced 100 mm cigarette delivering 9 mg tar and 0.7 mg nicotine. 27 mm CA filter with 45% ventilation and a high level of citrate on the cigarette paper. Filter contains a polyethylene tube insert which is similar in construction to filters used on Decade 85 and L & M Lights 85 and 100 cigarettes.

tube insert which is similar in construction to filters used on Decade 85 and L & M Lights 85 and 100 cigarettes.

6/83 Replaced by Eve Slim Lights 100 (Box).

**EVE SLIM LIGHTS 100 (BOX)**

6/83 Replaces Eve Light 100 - delivers 12 mg tar and 1 mg nicotine - 22.7 circumference.

**EVE LIGHT MENTHOL 100**

8/78 Introduced 100 mm menthol cigarette delivering 9 mg tar and 0.7 mg nicotine. 27 mm CA filter with 45% ventilation and a high level of citrate on the cigarette paper. Filter contains a polyethylene tube insert which is similar in construction to filters used on Decade 85 and L & M Lights 85 and 100 cigarettes.

6/83 Replaced by Eve Slim Lights Menthol 100 (Box).

**EVE SLIM LIGHTS MENTHOL 100 (BOX)**

6/83 Replaces Eve Light Menthol 100 - delivers 12 mg tar and 1 mg nicotine - 22.7 circumference.

**EVE 100**

6/70 Plain - 100 mm cigarettes in new pack with floral design - Tipping paper also has floral design.

3/72 Addition of expanded RKS to blend replacing a portion of regular RKS.

4/72 Change in filter length (20 to 25 mm) and fiber denier (3.4 to 4.5) - Change in alkaloids, reducing sugars, and filler rod TPM - Lower tobacco weight and rod density noted.

6/73 Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.

10/74 Cigarette length increased (97.8 to 98.7 mm).

3/75 Fiber shape changed (Y to I).

5/75 Design changed on tipping paper, package and carton.

1/76 Tipping paper length increased from 30 to 32 mm.

3/76 Tar (2 mg) and nicotine (0.1 mg) decreased by increasing filter length from 25 to 27 mm and increasing paper porosity.

9/76 Expanded stem level increased from 4 to 10%.

**EVE LIGHTS SLIM 120 (BOX)**

3/92 Cigarette re-engineered with a new packaging. Mfg. under license from Eve Holdings, Inc.

**EVE LIGHTS SLIM MENTHOL 120 (BOX)**

3/92 Cigarette re-engineered with a new packaging. Mfg. under license from Eve Holdings, Inc.

**EVE MENTHOL 100**

6/70 100 mm cigarette in new pack with floral design - Tipping paper also has a floral design.



- 12/72 Change in filter length (20 to 25 mm) and fiber denier (3.3 to 4.6). No change in smoke deliveries.
- 5/73 Reconstituted tobacco content increased (22 to 26%) - Resulted in lower total alkaloids, tar (1 mg) and nicotine (0.1 mg).
- 6/73 Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.
- 4/75 Fiber denier (3.4 to 4.5) and fiber shape (Y to I) changed. Filter weight increased. No change in smoke deliveries.
- 5/75 Design changed on tipping paper, package and carton.
- 1/76 Tipping paper length increased from 30 to 32 mm.
- 4/76 Tar (3 mg) and nicotine (0.1 mg) decreased by increasing filter length (25 to 27 mm) and increasing paper porosity. Menthol in smoke decreased (0.6 to 0.5 mg).
- 9/76 Expanded stem level increased from 4 to 10%.

**EVE ULTRA LIGHTS 100 (BOX)**

- 1/91 Distributed in North Carolina, Kentucky, Virginia, New York and Washington, DC - delivers 6 mg tar and 0.6 mg nicotine.

**EVE ULTRA LIGHTS MENTHOL 100 (BOX)**

- 1/91 Distributed in North Carolina, Kentucky, Virginia, New York and Washington, DC - delivers 7 mg tar, 0.5 mg nicotine and 0.3 mg smoke menthol.

**EVE 120**

- 3/76 Plain - test marketed - 21 mm circumference and filter ventilation of 50% - White cigarette paper and packaged in a crush-proof box.

**EVE MENTHOL 120**

- 3/76 Menthol - test marketed - 21 mm circumference and filter ventilation of 50% - White cigarette paper and packaged in a crush-proof box.

**EVE ULTRA 120 (BOX)**

- 11/88 Distributed nationally - delivers 5 mg tar and 0.5 mg nicotine.

**EVE ULTRA MENTHOL 120 (BOX)**

- 11/88 Distributed nationally - delivers 6 mg tar, 0.6 mg nicotine and 0.4 mg smoke menthol.

**L & M LONG SIZE (BOX) [L & M 80 (Box)]**

- 12/57 Introduced - delivers 25 mg tar.
- 12/62 Tobacco weight decrease.
- 7/78 Tobacco weight decrease (0.707 to 0.675 g) - tar decreased (16.5 to 14.3 g).
- 1/82 Tar decreased (13.2 to 12.4 mg) due to filter length increase (20 to 21 mm).

Discontinued.

**L & M KING SIZE (BOX)**

7/91 National distribution - 12 mg tar, 0.9 mg nicotine, 25 mm CA filter.

**L & M KING SIZE [L & M 85]**

10/60 Citrate to phosphate paper.

9/60- 3/61 Lighter, dull cellulose acetate filter on all sizes, no changes in efficiency.

9/62 Faster burning, more porous paper, reduced TPM (5 mg) and nicotine (0.2 mg).

9-12/62 Alkaloids reduced gradually.

4/63 TPM reduced by 1.5 mg - Alkaloids and nicotine delivery also reduced.

4/65 Filler alkaloids increased slightly and fiber denier changed from 2.5 to 2.0 on all sizes.

9/65 Fiber shape (cloverleaf to I) and fiber denier (2.0 to 2.3) changed.

12/65 TPM and nicotine deliveries increased - Filler alkaloids also increased.

4/66 TPM increased - less efficient filter resulting from change in fiber shape and denier.

10/66 Filter length increased, 17 to 20 mm.

10/67 Tar (2 mg) and nicotine (0.1 mg) decreased by lower filler rod TPM.

12/67 Tar (2 mg) and nicotine (0.1 mg) decreased by lower filler rod TPM.

7/70 Nicotine delivery (0.1 mg) increased by higher alkaloids.

1/71 Tar (1 mg) and nicotine (0.1 mg) decreased. Lower tobacco weight and rod density observed.

3/72 Addition of expanded RKS to blend replacing a portion of regular RKS.

6/73 Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.

3/75 Filter length (20 to 21 mm) and tipping paper (24 to 25 mm) increased. Fiber denier (3.5 to 3.0) and fiber shape (Y to I) changed. Alkaloids decreased. Nicotine delivery lower (1.3 to 1.2 mg).

1/76 Tipping paper length increased from 25 to 26 mm.

9/76 Expanded stem level increased from 4 to 10%.

2/77 A change in paper component from phosphate to citrate reduced the tar (18 to 17 mg) and filler rod TPM (34 to 31 mg). Faster static burning time also noted.

3/78 Lower tar (17 to 15 mg) and nicotine (1.1 to 0.9 mg) deliveries resulting from decrease in tobacco weight and a more porous cigarette paper. Levels of expanded tobacco and expanded stems in blend were increased.

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- 12/81 Increase in filter length (21 to 25 mm) and tipping paper (26 to 30 mm). Filter fiber denier (3.0/Y to 3.7/Y) and paper porosity (13 to 16 sec.) were changed.
- 3/83 Lower total RTD resulted due to change to mechanically perforated cigarette paper. Increased paper component.
- 5/85 Decreased paper component (1.4 to 0.5%) and less porous paper (7 to 12 sec.) - decreased puff count (7.6 to 6.6) - Lower tobacco weight (0.650 to 0.619 mg) and rod density (0.223 to 0.210 g/cc) were noted - higher CO delivery (12 to 13 mg).
- 5/86 Change to perforated cigarette paper.

**L & M LIGHTS 100 30'S**

- 9/87 Distributed in North Carolina - deliver 13 mg tar, 1.2 mg nicotine and has a 23 mm circumference - 30 cigarettes per pack - packed in an 8-7-7-8 configuration - 300 cigarettes per carton.

Discontinued.

**L & M FLAVOR LIGHTS KING SIZE [L & M Flavor Lights 85]**

- 9/76 Introduced - test market - Low tar (8 mg) and nicotine (0.6 mg) deliveries achieved by filter ventilation. Blend contains no reconstituted tobacco or added stem. Filter contains a 14 mm polyethylene tube originating at the tobacco rod end.
- 10/80 Filter changed by removing polyethylene tube insert resulted in lower filter ventilation and higher filter RTD. No change in smoke deliveries.

Discontinued.

**L & M LONG LIGHTS 100**

- 3/77 Test marketed - Low tar (8 mg) and nicotine (0.7 mg) deliveries achieved by filter ventilation (56%). Blend contains no reconstituted tobacco or added stem. 27 mm CA filter contains a polyethylene tube insert. Tar listed on package as "Only 8 mg tar."
- 10/80 Filter change by removing polyethylene tube insert and increasing fiber denier. No change in smoke deliveries.
- 11/80 Increase in filter length from (27 to 30 mm) and a change to a smaller fiber denier were noted. No change in smoke deliveries.

**L & M LONG LIGHTS MENTHOL 100**

- 6/80 Introduced - Tar (8 mg) and nicotine (0.8 mg) - Very similar in characteristics to L & M Long Lights 100.
- 8/81 Increase in filter length (27 to 30 mm). No change was observed in the smoke deliveries.

Discontinued.

**L & M 100**

- 7/67 100 mm cigarette with 20 mm CA filter.
- 10/67 Tar (2 mg) and nicotine (0.2 mg) reduced by lower filler rod TPM.

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- 12/67 Tar (1 mg) and nicotine (0.1 mg) reduced by a change to a more porous paper.
- 3/68 Tipping paper increased (24 to 27 mm), no change in smoke deliveries.
- 7/70 Nicotine delivery (0.1 mg) increased by higher alkaloids.
- 1/71 Tar (1 mg) and nicotine (0.1 mg) decreased. Lower tobacco weight and rod density observed.
- 5/71 Filter length (20 to 25 mm) and tipping paper (27 to 30 mm) increased. Fiber denier changed resulting in less efficient filter. Tar (1 mg) and nicotine (0.1 mg) increased.
- 3/72 Addition of expanded RKS to blend replacing a portion of tobacco weight and rod density.
- 6/73 Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.
- 9/73 Cigarette length decreased 100 to 99 mm.
- 3/75 Fiber shape changed (Y to I).
- 1/76 Tar (2 mg) decreased resulting from increased filter and tipping paper lengths. A more porous cigarette paper was also noted.
- 9/76 Expanded stem level increased from 4 to 10%.
- 3/78 Lower tar (17 to 15 mg) and nicotine (1.1 to 1.0 mg) deliveries resulting from decrease in tobacco weight and a change to a more porous cigarette paper. Levels of expanded tobacco and expanded stems in blend were increased.
- 2/81 Tar (14.3 to 13.2 mg) and nicotine (1.06 to 0.99 mg) reduced - increase in tipping paper length (32 to 35 mm).
- 6/81 Filter length increased (27 to 30 mm) - higher filter RTD (2.5 to 2.9) - decrease in tobacco weight (0.16 to 0.18 g).
- 6/83 11% Freon expanded tobacco added to blend.
- 7/83 Tobacco weight (0.754 to 0.700) and rod density (0.227 to 0.208 g/cc) decreased due to increased amount of freon expanded tobacco in the blend (17 to 28%).
- 11/83 Tar (13.2 to 12.4 mg) and CO (14.7 to 13.0 mg) deliveries decreased due to the use of perforated cigarette paper that is more porous (14 to 7 sec.) with a higher level of paper component (0.4 to 1.4%).
- 7/90 Filter ventilation added (36%)-cigarette paper changed from mechanically perforated to inherently porous-permeability decreased (119 to 68 CU)-lower tar (13 to 11 mg) and CO (12 and 11 mg) deliveries and lower total RTD (121 to 99 mm) were noted - a higher puff count (8 to 9) and longer static burning time (7 to 8 min.) were noted.

**L & M 100 30'S**

- 5/91 Test marketed in Tennessee - The carton advertises "10 Extra per Pack - No Extra Cost."  
Reduced circumference (22.6 to 24.8 mm), lower tobacco weight (0.61 to 0.72 g), lower filter weight (0.13 to 0.17 g), no ventilation, lower RTD (59 vs. 81 mm of H<sub>2</sub>O), denier changed from

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3.6/Y to 5.5/Y, permeability increased from 64 to 161 ml/cm<sup>2</sup> x min., cigarette paper is perforated similarly to L & M 85. FTC tar increased (12 to 14 mg) and puff count decreased (10.2 to 8.7 puffs/cigt.).

Discontinued.

**L & M MENTHOL 100**

- 2/67 Introduced - 100 mm mentholated cigarette with 20 mm CA filter.
- 11/67 Tar (3 mg) decreased as tipping paper length was increased.
- 7/70 Nicotine delivery (0.1 mg) increased by higher alkaloids.
- 11/71 Tar (2 mg) and nicotine (0.1 mg) decreased correlating with lower filler rod TPM.
- 3/72 Addition of expanded RKS to blend replacing a portion of regular RKS.
- 10/72 Filter length (20 to 25 mm) and tipping paper (27 to 30 ) increased. No change in filter efficiency or smoke deliveries.
- 9/73 Cigarette length decreased 100 to 99 mm.
- 4/75 Fiber shape changed (Y to I).
- 6/76 Lower tar (2 mg) and nicotine (0.1 mg) as result of increase in filter length and tipping paper length. Lower tobacco weight and reducing sugars content noted.
- 9/76 Expanded stem level increased from 4 to 10%.
- 7/78 Lower tar (17 to 15 mg) delivery observed. A change in a more porous cigarette paper and a reduction in tobacco weight were also noted.

Discontinued.

**L & M SUPERIOR KING SIZE [L & M Superior 85]**

- 7/83 Test marketed - Texas - delivers 14 mg tar and 1 mg nicotine - packaged in a black pack.

Discontinued.

**L & M ULTRA LIGHTS 100 30'S**

- 5/91 Test marketed in Tennessee - 6 mg tar and 0.5 mg nicotine - The carton advertises "10 Extra per Pack - No Extra Cost." Reduced circumference (22.8 vs. 24.8 mm), and lower tobacco weight (0.62 vs. 0.72 g).

Discontinued.

**LARK KING SIZE [Lark 85]**

- 4/63 Introduced - king size in soft pack - new triple filter containing special carbon granules with gas phase activity.
- 4/64 Carbon content increased.
- 9/66 TPM (2 mg) and nicotine (0.1 mg) deliveries decreased.

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### LARK KING SIZE [Lark 85]

- 4/63 Introduced - king size in soft pack - new triple filter containing special carbon granules with gas phase activity.
- 4/64 Carbon content increased.
- 9/66 TPM (2 mg) and nicotine (0.1 mg) deliveries decreased.
- 1/68 Fiber shape changed (I to Y) - no change in smoke deliveries.
- 3/72 Addition of expanded RKS to blend replacing a portion of regular RKS.
- 3/72 Reduction in gas phase activity - lower carbon content.
- 5/72 Alkaloids and reducing sugars higher - Nicotine delivery increased (0.1 mg).
- 6/73 Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.
- 4/74 Tar delivery increased (2 mg) - filler rod TPM increased, indicating blend change.
- 1/76 Tar delivery (2 mg) decreased correlating with a lower filler rod TPM.
- 5/76 Tar increased (1 mg) correlating with an increase in filler rod TPM.
- 9/76 Expanded stem level increased from 4 to 10%.
- 6/79 Lower tar (17 to 15 mg) and nicotine (1.3 to 1.1 mg) deliveries resulting from a change to a more porous paper and a lower tobacco weight. An increase in expanded tobacco (5 to 7%) and a decrease in the reconstituted material (16 to 14%) correlated with the lower tobacco weight. Circumference decreased from 25.0 to 24.7 mm.
- 1/82 Tipping paper length increased (25 to 30 mm) - less porous cigarette paper (7 to 15 sec.) - Tar decreased (14.0 to 13.5 mg).
- 6/82 Filter length increased (20 to 25 mm) - outer plug of plug-space-plug increased - decrease in tobacco weight.
- 7/85 Increased level of expanded tobacco (17 to 23%) - decreased tobacco weight and rod density.
- 7/92 Packing changed from the red pack to a red and burgundy pack with white lettering. A gold Lark appears above the brand name. Citrate (0.7) has been removed and replaced with phosphorus (0.1%). This change resulted in higher puff count (7.6 to 8.8), tar (12.7 to 14.6 mg), nicotine (1.00 to 1.16 mg) and CO (11.6 to 13.4 mg). Higher filler rod TPM (27.7 to 31.3 mg) and longer static burning time (6.9 to 9.4 min.). The fiber content changed from flax to woodpulp.

### LARK 100

- 9/68 Introduced - 100 mm cigarette with CA-space-CA filter, with space containing approximately 88 mg of carbon.
- 4/71 Tar (1 mg) increased correlating to a change in paper porosity and slower static burning time.
- 3/72 Addition of expanded RKS to blend replacing a portion of regular RKS.

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- 5/72 Alkaloids and reducing sugars higher - Nicotine delivery increased (0.1 mg).
- 6/73 Expanded tobacco added to blend (7%) resulting in lower tobacco weight and rod density.
- 9/73 Cigarette length decreased 100 to 99 mm.
- 9/76 Expanded stem level increased from 4 to 10%.
- 9/77 Increases in filter length (20 to 25 mm) and tipping paper length (28 to 30 mm) resulted in a slight reduction in tar delivery (18.7 to 18.2 mg). A lower tobacco weight was also noted.
- 6/79 Lower tar (18 to 16 mg) and nicotine (1.3 to 1.2 mg) deliveries resulting from a change to a more porous cigarette paper and a lighter tobacco weight. Increase in expanded tobacco (5 to 7%).
- 1/82 Tipping paper length increased (30 to 35 mm) - less porous cigarette paper (7 to 15 sec.) - decrease in tar (14.7 to 14.2 mg).
- 7/82 Tobacco weight (0.799 to 0.765 g) decreased - increased filter length (25 to 30 mm).
- 7/85 Increased level of expanded tobacco (17 to 23%) - decreased tobacco weight and rod density.
- 7/92 Packing changed from the red pack to a red and burgundy pack with white lettering. A gold Lark appears above the brand name. Citrate (0.7) has been removed and replaced with phosphorus (0.1%). This change resulted in higher puff count (9.1 to 11.0), tar (13.6 to 16.2 mg), nicotine (1.02 to 1.29 mg) and CO (13.1 to 15.4 mg). Higher filler rod TPM (25.2 to 31.4 mg) and longer static burning time (6.8 to 9.2 min.). The fiber content changed from flax to woodpulp.

**LARK II KING SIZE [Lark II 85]**

- 6/77 Test marketed - low tar (8 mg) and nicotine (0.5 mg) cigarette with a 25 mm CA filter with ventilation (47%). The CA filter has a pocket containing carbon granules (14 mg). Filter similar in construction to the ones used by Brown & Williamson on products containing Duolite granules in filters. Tar listed on pack as "Only 8 mg."

Discontinued.

**LARK LIGHTS KING SIZE [Lark Lights 85]**

- 11/78 Test marketed - 85 mm cigarette delivering 8 mg tar and 0.6 mg nicotine - 25 mm CA filter containing charcoal granules with 40% ventilation. Blend contains 19% Freon expanded tobacco.
- 8/81 The elimination of filter ventilation resulted in an increase in tar (7.1 to 12.8 mg), nicotine (0.70 to 0.99 mg) and CO (6.9 to 13.8 mg) deliveries. A change in filter construction from carbon in a pocket to carbon in a plug- space-plug filter was noted. An increase in carbon content (7 to 64 mg) and a more porous cigarette paper (12 to 7 sec.) were noted. Expanded tobacco decreased (26 to 15%) and reconstituted tobacco increased (10 to 16%). This resulted in an increase in tobacco weight (0.589 to 0.640 g). The packaging was changed from white to red. These cigarettes are now similar to Lark 85.
- 7/85 Increased level of expanded tobacco (17 to 23%) - decreased tobacco weight and rod density.

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- 8/81 The elimination of filter ventilation resulted in an increase in tar (7.2 to 13.1 mg) nicotine (0.65 to 1.08 mg) and CO (6.9 to 13.1 mg) deliveries. A change in filter construction from carbon in a pocket to carbon in a plug- space-plug filter was noted. An increase in carbon content (6 to 65 mg) and a more porous cigarette paper (12 to 6 sec.) were noted. Expanded tobacco decreased (26 to 15%) and reconstituted tobacco increased (10 to 16%). This resulted in an increase in tobacco weight (0.717 to 0.802 g). The packaging was changed from white to red. These cigarettes are now similar to Lark 100.
- 7/82 Tobacco weight (0.794 to 0.762 g) decreased - increased filter length (25 to 30 mm).
- 7/85 Increased level of expanded tobacco (17 to 23%) - decreased tobacco weight and rod density.
- 3/87 Higher CO delivery (13 to 14 mg) resulted from a decreased level of paper component (1.8 to 0.6%).
- 5/92 Packaging change from red and white pack to a gold pack with gray pin stripes and red lettering. A white lark appears above the brand name. No changes were noted.

**MASTERPIECE KING SIZE [Masterpiece 85]**

- 6/65 Introduced - King size in soft pack with "pipe tobacco blend" - High TPM and nicotine.
- 12/65 Discontinued.

**OASIS KING SIZE [Oasis 85]**

- 8/60 Citrate to phosphate paper.
- 4/61 Lighter, less efficient filter. Both changes increased TPM and nicotine deliveries.
- 2/62 Menthol content and delivery increased.
- 6/62 Lighter more efficient filter with 2.0 denier fibers instead of 9.0 denier. TPM and nicotine decreased respectively by 11 and 0.5 mg.
- 9/62 Faster burning, high porosity paper reduced TPM and nicotine delivery by 26%.
- 3/63 TPM reduced by 2.5 mg and nicotine delivery by 0.2 mg, also alkaloids and menthol decreased.
- 10/63 TPM reduced by 1 mg and nicotine delivery by 0.1 mg/cigt.
- 5/65 Nicotine delivery and filler alkaloids increased slightly.
- 8/65 Menthol content and delivery decreased.
- Discontinued.

**OMNI LUXURY LIGHTS MENTHOL 100**

- 7/81 Introduced - test market - Tar (9.2 mg) and nicotine (0.74 mg). The ventilation system consists of one row of laser perforation.
- Discontinued.



**PYRAMID KING SIZE (NF) [Pyramid 85 (NF)]**

1/89 Introduced nationally - will sell for \$2.50 less per carton than generic cigarettes - delivers 21 mg tar and 1.4 mg nicotine.

**PYRAMID FULL FLAVOR KING SIZE [Pyramid Full Flavor 85]**

9/89 Introduced nationally - will sell for a subgeneric price - delivers 15 mg tar and 1.1 mg nicotine - uses wood pulp cigarette paper.

3/92 Citrate was removed (0.3 to 0%) resulting in a longer static burning time (8.2 to 9.5 min.) and a higher puff count (8.2 to 8.8 puffs).

**PYRAMID FULL FLAVOR KING SIZE MENTHOL [Pyramid Full Flavor 85 Men.]**

9/89 Introduced nationally - will sell for a subgeneric price - delivers 15 mg tar, 1.1 mg nicotine and 0.5 mg smoke menthol - uses wood pulp cigarette paper.

**PYRAMID LIGHTS KING SIZE [Pyramid Lights 85]**

1/89 Introduced nationally - will sell for \$2.50 less per carton than generic cigarettes - delivers 14 mg tar and 1.1 mg nicotine.

3/90 Tar (14 to 11 mg), nicotine (1.1 to 0.8 mg) and CO (13 to 12 mg) deliveries decreased as the result of ventilation (none to 20%). Paper permeability decreased (143 to 46 CU) - fiber denier changed (4.4 to 3.2) - higher total RTD (117 to 126 mm) and filter RTD (65 to 96 mm) were noted.

**PYRAMID FULL FLAVOR 100**

9/89 Introduced nationally - will sell for a subgeneric price - delivers 16 mg tar and 1.3 mg nicotine - uses wood pulp cigarette paper.

3/92 Citrate was removed (0.4 to 0%) resulting in a longer static burning time (7.8 to 9.5 min.) and higher puff count (10.1 to 11.3 puffs).

**PYRAMID FULL FLAVOR MENTHOL 100**

9/89 Introduced nationally - will sell for a subgeneric price - delivers 16 mg tar, 1.3 mg nicotine and 0.5 mg smoke menthol - uses wood pulp cigarette paper.

**PYRAMID LIGHTS 100**

1/89 Introduced nationally - will sell for \$2.50 less per carton than generic cigarettes - delivers 14 mg tar and 1.1 mg nicotine.

3/90 Tar (13 to 11 mg), nicotine (1.0 to 0.9 mg) and CO (14 to 11 mg) deliveries decreased as the result of ventilation (none to 33%). A higher puff count (8.3 to 10.0), lower total RTD (131 to 110 mm) and higher filter RTD (65 to 79 mm) were observed. A less permeable paper was noted (77 to 67 CU).

**PYRAMID LIGHTS MENTHOL 100**

1/89 Introduced nationally - will sell for \$2.50 less per carton than generic cigarettes - delivers 14 mg tar, 1.1 mg nicotine and 0.5 mg smoke menthol.

3/90 Tar (14 to 11 mg), nicotine (1.1 to 0.9 mg) and CO (14 to 11 mg) deliveries as a result of ventilation (none to 34%). A lower level of paper component (2.0 to 0.5%) and a change to a less permeable cigarette paper (124 to 53 CU) resulted in a higher puff count (8.3 to 9.8). A lower total RTD (125 to 102 mm) and higher filter RTD (69 to 80 mm) were noted.

**PYRAMID ULTRA LIGHTS 100**

1/89 Introduced nationally will sell for \$2.50 less per carton than generic cigarettes - delivers 6 mg tar and 0.6 mg nicotine.

**ST. MORITZ 100**

7/74 Plain - Test marketed - Previously marketed by Larus & Bro. Blend contains both expanded tobacco and stems. Tar delivery is 18 mg.

8/76 Tar decreased from 19 to 16 mg.

7/77 Filter length increased 25 to 27 mm.

7/78 Tar decreased 16 to 13 mg; change to a more porous, mechanically perforated cigarette paper.

Discontinued

**ST. MORITZ MENTHOL 100**

7/74 Menthol - Test marketed - Previously marketed by Larus & Bro. Blend contains both expanded tobacco and stems. Tar delivery is 18 mg.

2/78 Lower tar (17 to 14 mg) and nicotine (1.1 to 1.0 mg) deliveries resulting from an increase in filter length (25 to 27 mm) and a change to a more porous cigarette paper (22 to 13 sec.).

7/78 Replaced inherently porous cigarette paper with mechanically perforated paper. Decrease in tar (14.4 to 13.7 mg).

Discontinued

**SAVVY LIGHTS 100**

11/88 Test marketed in St. Louis, Missouri and Peoria, Illinois - delivers 10 mg tar and 0.9 mg nicotine.

1/91 Discontinued.

**SAVVY LIGHTS MENTHOL 100**

11/88 Test marketed in St. Louis, Missouri and Peoria, Illinois - delivers 10 mg tar, 0.9 mg nicotine and 0.4 mg smoke menthol.

1/91 Discontinued.

**SAVVY ULTRA LIGHTS 100**

11/88 Test marketed in St. Louis, Missouri and Peoria, Illinois - delivers 6 mg tar and 0.6 mg nicotine.

1/91 Discontinued.

**STRIDE KING SIZE [Stride 85]**

7/84 Value entry product distributed in Syracuse and Rochester, New York and Omaha, Nebraska. The pack is silver and burgundy. Similar to L & M 85 in smoke deliveries.

1/85 National

Discontinued

**STRIDE 100**

7/84 Value entry product distributed in Syracuse and Rochester, New York and Omaha, Nebraska. The pack is silver and burgundy. Similar to L & M 100 in smoke deliveries.

1/85 National.

Discontinued

**VELLO KING SIZE [Vello 85]**

10/75 Plain - Test marketed 21 mm CA filter with a single row of ventilation holes having a center core of 8.0 Y-shape fibers and an outer periphery of 3.0 I-shape fibers - Filter system developed by Dr. Vello Norman - Tar (12 mg) and nicotine (0.8 mg) deliveries.

11/76 Cigarette re-engineered - Lower tar and nicotine as a result of a change in filter construction and blend formulation.

Discontinued.

**VELLO MENTHOL KING SIZE [Vello Menthol 85]**

10/75 Menthol - Test marketed 21 mm CA filter with single row of ventilation holes having a center core of 8.0 Y-shape fibers and an outer periphery of 3.0 I-shape fibers - Filter system developed by Dr. Vello Norman - Tar (12 mg) and nicotine (0.8 mg) deliveries.

11/76 Cigarette re-engineered - Changes in filter construction and blend formulation same as for Vello 85 cigarettes.

Discontinued.

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### ASPEN MENTHOL KING SIZE [Aspen Menthol 85]

7/79 Test marketed - Low tar (9 mg) and nicotine (0.8 mg) with a 25 mm CA filter containing 33% ventilation. High level of citrate in a fast burning cigarette paper. Porous tipping paper with perforated plug wrap.

Discontinued.

### ASPEN MENTHOL 100

7/79 Test marketed - Low tar (9 mg) and nicotine (0.8 mg) with a 27 mm CA filter containing 40% ventilation. High level of citrate in a fast burning cigarette paper. Porous tipping paper with perforated plug wrap.

Discontinued.

### BEECH-NUT KING SIZE (NF) [Beech-Nut 85 (NF)]

7/61 Introduced - nonfilter, king size similar to Old Gold Straights.

Discontinued.

### BISTRO KING SIZE [Bistro 85]

9/81 Introduced - test market - Delivers 11 mg tar and 1.02 mg nicotine. The filter system uses micro-mechanical perforation.

Discontinued.

### BISTRO MENTHOL KING SIZE [Bistro Menthol 85]

9/81 Introduced - test market - Delivers 11 mg of tar, 1.01 mg of nicotine, and 0.35 mg menthol. The filter system uses micro-mechanical perforation.

Discontinued.

### CENTURY GREAT LENGTHS 100

9/67 100 mm cigarette with 20 mm CA filter. Name and warning label printed on cellophane - no identification on package.

2/68 Tar (2 mg) reduced by increase in tipping paper (24 to 30 mm).

3/69 Tar (1 mg) and nicotine (0.1 mg) decreased - change in filter - a new 25 mm dual filter with carbon noted.

Discontinued.

### DANVILLE KING SIZE [Danville 85]

4/66 Introduced - king size filter cigarette.

Discontinued.

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**DANVILLE MENTHOL KING SIZE [Danville Menthol 85]**

8/66 Introduced - mentholated cigarette with 20 mm CA filter.

Discontinued.

**DUNCAN KING SIZE (NF) [Duncan 85 (NF)]**

9/65 Introduced - king size nonfilter - filler has a larger cut than normal domestic cigarettes.

11/65 Plastic mouthpiece added to cigarette - no filtration from mouthpiece.

Discontinued.

**HARLEY DAVIDSON KING SIZE [Harley Davidson 85]**

9/87 Test marketed - Terre Haute, Indiana - 13 mg tar, 0.8 mg nicotine - black pack with Harley Davidson logo.

11/89 Re-introduced as a generic product in Arkansas test market - delivers 11 mg tar and 0.8 mg nicotine.

**HARLEY DAVIDSON LIGHTS KING SIZE [Harley Davidson Lights 85]**

11/89 Test marketed in Arkansas as a generic product - packaged in a black pack with a gold eagle embossed on the pack - delivers 8 mg tar and 0.7 mg nicotine.

**HELMAR LONG SIZE [Helmar 80]**

4/67 80 mm cigarette - 17 mm CA filter - contains no RKS or reconstituted material.

Discontinued.

**HERITAGE KING SIZE [Heritage 85]**

11/81 Introduced - test market - Delivers 10.9 mg tar and 0.93 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Bistro 85, Rebel 85, and Maverick 85.

Discontinued.

**HERITAGE LIGHTS KING SIZE [Heritage Lights 85]**

3/90 Test marketed in Louisville, Kentucky; Portland, Oregon and Maine. Delivers 10 mg tar and 0.8 mg nicotine.

Discontinued

**HERITAGE 100**

11/81 Introduced - test market - Delivers 11.6 mg tar and 1.01 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Rebel 100 and Maverick 100.

Discontinued

**HERITAGE LIGHTS 100**

3/90 Test marketed in Louisville, Kentucky; Portland, Oregon and Maine. Delivers 10 mg tar and 0.8 mg nicotine.

Discontinued

**KENT LONG SIZE (BOX) [Kent 80 (Box)]**

12/72 Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight and rod density and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted.

4/77 Filter length (20 to 21 mm) and tipping paper length (24 to 25 mm) increased. No change in smoke deliveries noted.

6/78 Decrease in tar delivery (15 to 13 mg) resulting from introduction of filter ventilation (17%). The new diluted filter is referred to on the pack as the Micronite II filter.

9/90 Package changed.

**KENT KING SIZE [Kent 85]**

5/61 Reconstituted tobacco first observed - Lighter filter with same efficiency.

11/61 Less porous paper with no effect on TPM or nicotine deliveries.

10/63 Alkaloids reduced by 0.1%.

4/64 Fiber shape changed cloverleaf to I.

8/64 Filter length increased 17 to 20 mm.

7/65 Alkaloids and nicotine delivery increased slightly.

9/65 Alkaloids and nicotine delivery increased.

4/66 TPM increased 1 mg.

6/67 TPM decreased 1 mg by an increase in paper porosity.

3/69 Tipping paper increased 24 to 25 mm.

4/69 Reconstituted tobacco content increased (8 to 12%).

10/69 RKS decreased (8 to 4%).

10/70 Reconstituted tobacco increased 10 to 17%.

9/71 Recon. tobacco increased (16 to 18%); RKS decreased (6 to 2%).

10/71 RKS decreased 2 to 0%.

5/72 Alkaloids and reducing sugars increased - Nicotine delivery increased (0.1 mg).

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- 12/72 Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted.
- 7/76 Filter length increased (20 to 21 mm). Lower tobacco weight and rod density noted.
- 6/77 Lower tar (17 to 13 mg) and nicotine (1.1 to 1.0 mg) resulted from the introduction of filter ventilation (27%). New ventilated filter is referred to on pack as the Micronite II filter.
- 11/78 Decrease in tar delivery (13 to 12 mg) resulting from an increase in filter ventilation.
- 9/90 Package change.

**KENT MENTHOL KING SIZE [Kent Menthol 85]**

- 5/71 Test marketed - Different from Kent 85 plain in many characteristics.

Discontinued.

**KENT 100**

- 4/67 Introduced - 100 mm cigarette with 20 mm CA filter.
- 11/67 Tar (1 mg) reduced by increasing tipping paper (24 to 27 mm).
- 1/68 Tar (2 mg) and nicotine (0.1 mg) reduced by increasing tipping paper (27 to 30 mm).
- 5/68 Tar (1 mg) and nicotine (0.1 mg) reduced by a change to a more porous paper.
- 10/69 RKS decreased (8 to 4%).
- 10/70 Reconstituted tobacco increased 10 to 17%.
- 9/71 Fiber shape changed from X-shape to Y-shape - Filter weight decreased - Tar increased (1 mg).
- 9/71 Reconstituted tobacco increased 16 to 18% - RKS decreased 6 to 2%.
- 10/71 RKS decreased 2 to 0%.
- 5/72 Alkaloids and reducing sugars increased - Nicotine delivery increased (0.1 mg).
- 12/72 Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density puff count, and higher total RTD - Also, lower tar and nicotine deliveries noted.
- 11/74 Tipping paper length increased 30 to 32 mm - tar (1 mg) and nicotine (0.1 mg) decreased.
- 5/75 Cigarette length (99.2 to 98.3 mm) decreased. Tobacco weight (0.87 to 0.84 g) decreased.
- 6/75 Filter length (25 to 27 mm) increased. No change in smoke deliveries.
- 8/76 Cigarette length increased (98.9 to 99.3 mm).
- 6/77 Lower tar (19 to 15 mg) and nicotine (1.3 to 1.1 mg) resulted from a change to a more efficient filter (42-52%) and more porous cigarette paper. Higher total and filter RTD's noted.

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- 7/77 Lower tar delivery (15 to 13 mg) resulting from introduction of filter ventilation (30%). Change to a less efficient filter was also noted. The new ventilated filter is referred as the Micronite II filter.
- 12/77 Decrease in filter ventilation and change to a less porous cigarette paper resulted in an increase in tar delivery (13.6 to 14.5 mg).
- 8/78 Decrease in tar delivery (14 to 13 mg) resulted from an increase in filter ventilation. Decrease in total RTD was noted.
- 3/87 Tipping paper length increased (32 to 34 mm) - no changes were noted in filter length or smoke deliveries.
- 9/90 Package change.

#### **KENT MENTHOL 100**

- 6/70 100 mm mentholated cigarette similar to Kent 100.
- 8/71 Filter fiber shape changed from X-shape to Y-shape - Filter weight decreased.
- 9/71 Recon. tobacco increased 16 to 18% - RKS decreased 6 to 2%.
- 10/71 RKS decreased 2 to 0%.
- 12/72 Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and puff count. Also, lower tar and nicotine deliveries noted.
- 1/75 Tipping paper length increased (30 to 32 mm) - Lower tar (1 mg) and nicotine (0.1 mg).
- 5/75 Cigarette length (99.1 to 98.3 mm) decreased. Tobacco weight (0.84 to 0.82 g) decreased.
- 5/76 Filter length increased from 25 to 27 mm.
- 8/76 Cigarette length increased (98.3 to 99.2 mm).
- 8/78 Introduction of filter ventilation at the 25% level resulted in lower tar delivery (17 to 15 mg).

#### **KENT III KING SIZE [Kent III 85]**

- 11/78 Test marketed - 85 mm cigarette delivering 4 mg tar and 0.4 mg nicotine. Characterized by high alkaloid blend (2.8%) containing 19% Freon expanded tobacco. 25 mm dual CA filter with 63% ventilation.
- 4/82 Tar (3 to 2 mg) data changed on pack to comply with FTC Report.
- 7/83 Tar and nicotine deliveries removed from the pack.
- 9/90 Package changed.

#### **KENT III 100**

- 10/79 Brand extension of Kent III 85. Tar (5 mg) and nicotine (0.5 mg) deliveries. Brand characterized by a high alkaloid blend containing 19% expanded tobacco and a dual 27 mm CA filter with 51% ventilation. Ventilation achieved by 6 rows of mechanically perforated holes.



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- 4/82 Tar (5 to 4 mg) and nicotine (0.6 to 0.5 mg) data changed on pack to comply with FTC Report.
- 7/83 Tar and nicotine deliveries removed from the pack.
- 7/87 Tipping decreased (35 to 34 mm) - lower tar, nicotine and CO deliveries resulted from increased ventilation.
- 11/87 Tar, nicotine and CO increased as a result of lower ventilation.
- 1/88 The tar, nicotine and CO deliveries decreased as a result of higher ventilation. A lower total RTD was noted.
- 9/90 Package changed.

**KENT III 100 (BOX)**

- 11/84 Nationally introduced - similar to Kent III 100 (Soft Pack).

**KENT GOLDEN LIGHTS LONG SIZE (BOX) [Kent Golden Lights 80 (Box)]**

- 7/85 Introduced nationally - delivers 9 mg tar and 0.7 mg nicotine.

**KENT GOLDEN LIGHTS KING SIZE [Kent Golden Lights 85]**

- 11/75 Plain - Introduced porous tipping paper with perforated plug wrap - Longest tipping paper (32 mm) of any 85 mm cigarette - Tar (9 mg) and nicotine (0.8 mg) deliveries.
- 3/76 Tar (9 to 8 mg) and nicotine (0.8 to 0.7 mg) deliveries decreased by increasing filter ventilation and paper porosity. Filler alkaloids content decreased.
- 12/76 Cigarette length increased (84.2 to 84.8 mm). Decrease in rod density and total RTD.
- 7/78 Cigarette length decreased (84.7 to 84.1 mm); lower tobacco weight also noted.
- 10/78 Lorillard changed the name of Kent Golden Lights 85 to Golden Lights 85. The product is the same; only the name has changed.
- 5/82 Tar (8 to 7 mg) and nicotine (0.8 to 0.7 mg) values changed on pack to comply with FTC Report.
- 6/83 Name changed back to Kent Golden Lights 85.
- 1/86 Increased tar, nicotine and CO deliveries resulted from lower ventilation.
- 7/90 Perforation type changed from porous to laser - lower ventilation (38 to 31%) and higher total RTD (98 to 137 mm) and filter RTD (86 to 113 mm) resulted. Higher CO was observed (8 to 10 mm).
- 9/90 Package changed.

**KENT GOLDEN LIGHTS MENTHOL KING SIZE [Kent Golden Lights Men. 85]**

- 6/76 Test marketed - similar to Golden Lights 85 - Tar (8 mg) and nicotine (0.7 mg) deliveries.
- 11/77 Lower tar delivery (8.7 to 7.4 mg) resulting from an increase in filter ventilation.

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- 10/78 Lorillard changed the name of Kent Golden Lights Menthol 85 to Golden Lights Menthol 85. The product is the same; only the name has changed.
- 6/83 Name changed back to Kent Golden Lights Menthol 85.
- 3/84 Tar (8 to 9 mg) and CO (8 to 9 mg) deliveries increased due to higher level of paper component (1.3 to 2.1%) - higher filler menthol (1.6 to 2.0 mg) correlated with higher smoke menthol (0.28 to 0.36 mg).
- 9/84 Paper component decreased (2.1 to 1.6%) - no changes in smoke deliveries.
- 1/85 Tar (8.7 to 8.0 mg) and CO (9.0 to 7.4 mg) decreased - increased filter ventilation (34 to 43%).
- 3/86 Increased tar, nicotine and CO deliveries resulted from lower ventilation.
- 7/90 Perforation type changed from porous to laser - lower ventilation (37 to 29%) and higher total RTD (100 to 133 mm) and filter RTD (84 to 114 mm) resulted. Higher CO was observed (8 to 9 mm).
- 9/90 Package changed

#### **KENT GOLDEN LIGHTS 100**

- 5/77 Introduced - low tar (9 mg) and nicotine (0.8 mg) with 27 mm CA filter containing ventilation (40%). High level of paper component in a fast burning cigarette paper. Porous tipping paper with perforated plug wrap. Tar (10 mg) and nicotine (0.9 mg) listed on pack.
- 10/78 Lorillard changed the name of Kent Golden Lights 100 to Golden Lights 100. The product is the same; only the name has changed.
- 5/82 Nicotine value (0.7 to 0.8 mg) changed on pack to comply with FTC Report.
- 6/83 Name changed back to Kent Golden Lights 100.
- 7/87 Tipping decreased (35 to 34 mm).
- 9/90 Package changed.

#### **KENT GOLDEN LIGHTS 100 (BOX)**

- 7/85 Introduced nationally - delivers 9 mg tar and 0.8 mg nicotine.

#### **KENT GOLDEN LIGHTS MENTHOL 100**

- 5/77 Introduced - Similar to the Golden Lights 100 cigarettes.
- 10/78 Lorillard changed the name of Kent Golden Lights Menthol 100 to Golden Lights Menthol 100. The product is the same; only the name has changed.
- 6/82 Tar data changed on pack (8 to 7 mg) to comply with FTC Report.
- 6/83 Name changed back to Kent Golden Lights Menthol 100.
- 9/90 Package changed.

**L.T. BROWN 120**

6/75 Plain - Introduced 120 mm cigarettes - 30 mm CA filter. Tar (20 mg) and nicotine (1.5 mg) deliveries. Dark brown cigarette paper with pin-stripe lines.

Discontinued.

**L.T. BROWN MENTHOL 120**

6/75 Menthol - Introduced 120 mm cigarettes - 30 mm CA filter. Tar (20 mg) and nicotine (1.5 mg) deliveries. Dark brown cigarette paper with pin-stripe lines.

Discontinued.

**LUKE KING SIZE [Luke 85]**

1/74 Test marketed - new 85 mm "full flavor" cigarette - Blend contains expanded tobacco (7%).

Discontinued.

**MAVERICK KING SIZE [Maverick 85]**

11/71 Test marketed - High alkaloid blend (2.0%) and nicotine delivery (1.6 mg) for Lorillard product - 20 mm CA filter.

5/72 Alkaloids decreased - Sugars increased - Tar (2 mg) and nicotine (0.1 mg) reduced - Filler rod TPM reduced (3 mg).

5/81 Test marketed in Washington State - 85 mm - tar (10.3 mg) and nicotine (0.86 mg) - filter ventilation by band of MP holes.

Discontinued.

**MAVERICK 100**

5/81 Test marketed in Washington State - 100 mm, tar (10.6 mg) and nicotine (0.91 mg) - filter ventilation by band of MP holes.

Discontinued.

**MAX SLIM LIGHTS 100 (BOX)**

2/82 Introduced - Tar (10 mg) and nicotine (0.9 mg) - Two rows mechanical perforation (32% ventilation) - similar to Virginia Slims Lights 100.

Discontinued.

**MAX SLIM LIGHTS MENTHOL 100 (BOX)**

2/82 Introduced - Tar (10 mg), nicotine (0.9 mg), and menthol (0.39 mg) - Two rows of mechanical perforation (32% ventilation) similar to Virginia Slims Lights Menthol 100.

Discontinued.

**MAX 120**

7/75 Plain - Introduced 120 mm cigarette with 30 mm CA filter - White cigarette paper - Tar (16 mg) and nicotine (1.2 mg) deliveries.

**MAX MENTHOL 120**

7/75     Menthol - Introduced 120 mm cigarette with 30 mm CA filter - White cigarette paper - Tar (16 mg) and nicotine (1.2 mg) deliveries.

**NEWPORT LONG SIZE (BOX) [Newport 80 (Box)]**

2/75     Filter length (17 to 20 mm) and tipping paper length (22 to 24 mm) increased. Tar (18 to 16 mg) and nicotine (1.2 to 1.1 mg) deliveries decreased.

**NEWPORT LONG SIZE (NON-MENTHOL-BOX) [Newport 80 (non-men) (Box)]**

4/81     Test marketed in Penn. - 80 mm, non-mentholated, tar (11.8 mg) and nicotine (1.04 mg) - filter ventilation by band of MP holes.

Discontinued.

**NEWPORT KING SIZE [Newport 85]**

- 12/61     Less porous paper with no effect on TPM or nicotine delivery.
- 6/63     Alkaloids decreased by 0.2%.
- 12/63     Increases observed in TPM and nicotine deliveries - Blend change indicated by increases in total alkaloids.
- 4/65     Nicotine delivery and filler alkaloids increased.
- 1/66     TPM and nicotine increased - less efficient filter - change in filter fiber denier.
- 7/66     Alkaloids and nicotine delivery decreased.
- 1/67     Filter length increased (17 to 20 mm).
- 4/67     RKS content increased 8 to 12%.
- 7/68     Tar (1 mg) and nicotine (0.1 mg) lower, no other changes noted.
- 9/68     Reconstituted material increased, 8 to 13%.
- 10/68     Package design change.
- 11/68     Color of tipping paper changed from white to cork.
- 8/69     Tar (2 mg), nicotine (0.1 mg), and menthol delivery (0.15 mg) decreased, amount of paper component increased, faster static burning time, filler menthol lower.
- 11/69     Blend change, higher alkaloids and lower sugars - more porous cigarette paper. No change in smoke deliveries.
- 10/70     Reconstituted tobacco increased 11 to 16% - RKS decreased 9 to 4%.
- 9/71     Reconstituted tobacco increased 16 to 18% - RKS decreased 6 to 0%.
- 11/71     Fiber shape changed X to Y.

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- 5/72 Tar delivery (1.5 mg) and filler rod TPM (2 mg) decreased - Alkaloids increased.
- 8/72 Tar (1 mg) and nicotine (0.2 mg) increased - Changes noted in total alkaloids and paper porosity. Fiber shape and denier change correlating with a more efficient filter.
- 12/72 Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted.
- 5/76 Tar (2 mg) and nicotine (0.1 mg) deliveries were higher - Increase in filler rod TPM and filler alkaloids content.
- 12/76 Filter length (20 to 21 mm) and tipping paper length (24 to 25 mm) increased.

**NEWPORT KING SIZE 10'S [Newport 85 10's]**

- 5/91 Test marketed in Mississippi and Louisiana - 10 cigarettes per pack - sold for one-half the price of a 20 per pack, delivers 19 mg tar, 1.4 mg nicotine.

**NEWPORT KING SIZE 25's [Newport 85 25's]**

- 7/85 Test marketed in Pennsylvania - similar to Newport 85 - 200 cigarettes per carton - eight packs per carton.
- 3/86 Test market expanded - all East Coast.

**NEWPORT KING SIZE (NON-MENTHOL-BOX) [Newport 85 (Non-Men. Box)]**

- 4/81 Test marketed in Penn. - 85 mm, non-mentholated, tar (13 mg) and nicotine (1.08 mg) - filter ventilation by band of MP holes.

Discontinued.

**NEWPORT 100**

- 6/67 Introduced - 100 mm mentholated cigarette with 20 mm CA filter.
- 7/68 Tar (3 mg) and nicotine (0.2 mg) reduced by increase in tipping paper length (24 to 30 mm).
- 9/68 Filter length increased (20 to 25 mm), no change in smoke deliveries.
- 11/68 Tar (3 mg) increased - Filter length (20 to 25 mm) and fiber denier change - Also, tipping paper changed from white to cork.
- 9/69 Menthol in smoke and filler decreased.
- 11/69 Blend change, higher alkaloids and lower sugars - more porous cigarette paper - No change in smoke deliveries.
- 10/70 Reconstituted tobacco increased 11 to 16%.
- 9/71 RKS decreased 7 to 3%.
- 10/71 RKS decreased 3 to 0%.
- 8/72 Tar (2 mg) and nicotine (0.3 mg) were increased by changes in total alkaloids and paper porosity - Fiber shape and denier changed.

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- 12/72 Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, puff count, and higher total RTD - Also, lower tar and nicotine deliveries noted.
- 7/74 Blend change - Higher alkaloids and increased filler rod TPM delivery resulting in higher tar (1 mg) and nicotine (0.1mg).
- 2/75 Tipping paper length (30 to 32 mm) increased. Tar (20 to 19 mg) and nicotine (1.4 to 1.3 mg) deliveries decreased.
- 4/75 Cigarette length (99.2 to 98.3 mm) decreased. Lower tobacco weight noted. No change in smoke deliveries.
- 11/75 Increase in tar (1 mg) and nicotine (0.1 mg) resulting from a change to a less porous paper-Filter length increased from 25 to 27 mm.
- 5/76 Tar (2 mg) and nicotine (0.1 mg) deliveries were higher - Increase in filler rod TPM and filler alkaloids content.
- 12/76 Cigarette length increased (98.2 to 99.3 mm).
- 3/87 Tipping paper length increased (32 to 34 mm) - no changes were noted in filter length or smoke deliveries.

#### **NEWPORT 100 10'S**

- 5/91 Test marketed in Mississippi and Louisiana - 10 cigarettes per pack - sold for one-half the price of a 20 per pack, delivers 21 mg tar and 1.5 mg nicotine.

#### **NEWPORT 100 25'S**

- 7/85 Test marketed in Pennsylvania - similar to Newport 100 - 200 cigarettes per carton - eight packs per carton.
- 3/86 Test market expanded - all East Coast.
- 3/87 Tipping paper length increased (32 to 34 mm) - no changes were noted in filter length or smoke deliveries.

#### **NEWPORT 100 (BOX)**

- 6/84 Test marketed in Connecticut - tar 20 mg, nicotine 1.6 mg.

Discontinued.

#### **NEWPORT LIGHTS LONG SIZE (BOX) [Newport Lights 80 (Box)]**

- 3/80 Test marketed - Tar (8 mg) and nicotine (0.7 mg) - Low delivery result of 33% filter ventilation with porous tipping paper. Similar to physical characteristics and blend composition of Newport Lights 85.
- 9/91 Test marketed in Michigan with white tipping paper instead of cork.

**NEWPORT LIGHTS KING SIZE [Newport Lights 85]**

- 5/77 Test marketed - low tar (10 mg) and nicotine (0.8 mg). Characterized by a 25 mm CA filter with ventilation (27%) and a high level of paper component in a fast burning cigarette paper. Ventilation system utilizes porous tipping paper.
- 1/86 Increased tar and CO deliveries resulted from lower ventilation.
- 9/91 Test marketed in Michigan with white tipping paper instead of cork.

**NEWPORT LIGHTS 100**

- 9/81 Introduced - nationally - Delivers 9 mg tar, 0.78 mg nicotine, and 0.36 mg of menthol. The low delivery is achieved by using porous tipping paper.
- 1/86 Increased tar, nicotine and CO deliveries resulted from lower ventilation - higher total RTD resulted.
- 3/86 Decreased tar, nicotine and CO deliveries resulted from higher ventilation - lower total RTD resulted.
- 9/89 Tar (10 to 9 mg), CO (9 to 7 mg) and smoke menthol (0.4 to 0.3 mg) deliveries decreased as a result of increased ventilation (37 to 44%) - A lower total RTD was observed (108 to 101 mm).
- 1/91 Changed ventilation from porous paper to laser ventilation with four rows of ventilation holes; decreased ventilation (52 to 33%), increased tar delivery, total RTD increased (91 to 127) and filter RTD increased (81 to 100).
- 9/91 Test marketed in Michigan with white tipping paper instead of cork.

**NEWPORT LIGHTS 100 (BOX)**

- 6/84 Test marketed in Connecticut - tar 9 mg, nicotine 0.8 mg.
- Discontinued.

**NEWPORT SLIM LIGHTS MENTHOL 100 (BOX)**

- 3/86 Test marketed - delivers 8 mg tar, 0.7 mg nicotine and 0.6 mg smoke menthol.
- Discontinued.

**NEWPORT STRIPES 100 (BOX)**

- 9/87 Test marketed - New York - delivers 11 mg tar, 0.8 mg nicotine, only non-mentholated Newport on the market.

**NEWPORT STRIPES 100 MENTHOL (BOX)**

- 9/87 Test marketed - New York - delivers 11 mg tar, 0.8 mg nicotine and 0.6 mg smoke menthol.

**OLD GOLD LONG SIZE (BOX) [Old Gold 80 (Box)]**

- 5/74 Introduced in flip-top box - Similar to Old Gold 85.
- Discontinued.

**OLD GOLD 100**

- 5/69 Introduced - 100 mm cigarette with 25 mm CA filter.

- 6/69 Coupon added to pack.
- 10/70 Reconstituted tobacco increased 10 to 16% - RKS decreased 9 to 4%.
- 2/75 Filter length (25 to 27 mm) increased - Tipping paper length (30 to 32 mm) increased. Tar (21 to 20 mg) and nicotine (1.4 to 1.3 mg) deliveries decreased.

**OLD GOLD FILTER KING SIZE [Old Gold Filter 85]**

- 1/63 Alkaloids reduced by 0.2%, nicotine delivery decreased.
- 4/65 Nicotine delivery and filler alkaloids increased - TPM increased slightly.
- 5/65 Filter length (17 to 20 mm) and fiber denier increased - tobacco weight decreased.
- 1/66 Coupon added to pack.
- 7/66 TPM (2 mg) and nicotine (0.1 mg) deliveries increased.
- 5/70 Reconstituted tobacco content increased (9 to 12%).
- 10/70 Reconstituted tobacco increased 10 to 16% - RKS decreased 8 to 5%.
- 9/71 Reconstituted tobacco increased 16 to 19% - RKS decreased 6 to 0%.
- 10/71 Filter fiber shape (I to Y) and denier (3.6 to 3.0) changed - No change in smoke deliveries.
- 12/72 Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and higher total RTD - Also, lower puff count, tar, and nicotine deliveries were noted.
- 9/73 Tipping paper length increased (24 to 25 mm).
- 11/74 Filter length (20 to 21 mm) and tipping paper length (25 to 26 mm) increased.
- 12/76 Tar (1 mg) and nicotine (0.1 mg) increased as result of increase in filler rod TPM.
- 9/78 Lower tar (17 to 16 mg) and filler rod TPM deliveries observed resulting from a decrease in tobacco weight.
- 11/79 Coupon dropped from pack.
- 5/91 Discontinued shipments for the full margin brand in Kentucky. Test marketed as a branded generic - package changed, total RTD increase (135 to 115 mm of H<sub>2</sub>O), smoke deliveries similar to full margin brand.

**OLD GOLD LIGHTS KING SIZE [Old Gold Lights 85]**

- 8/77 Introduced on test market - Low delivery (9 mg tar and 0.8 mg nicotine) cigarettes characterized by 25 mm CA filter with 34% ventilation. Ventilation achieved using porous tipping paper. Further characterized by a high level of paper component on cigarette paper.

**OLD GOLD STRAIGHTS KING SIZE (NF) [Old Gold Straights 85 (NF)]**

- 5/60 Long to king size.



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### **OLD GOLD LIGHTS 100**

5/85 Test marketed - delivers 12 mg tar and 0.9 mg nicotine.

5/91 Test marketed as a branded generic in Kentucky - delivers 13 mg tar, 1.0 mg nicotine.

### **REBEL KING SIZE [Rebel 85]**

10/81 Introduced - test market - These cigarettes deliver 11.1 mg tar and 0.96 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Maverick 85.

4/83 Discontinued.

### **REBEL 100**

10/81 Introduced - test market - These cigarettes deliver 10.9 mg tar and 0.99 mg nicotine. The ventilation system consists of a band of micro-mechanical perforation. These cigarettes are similar to Maverick 100.

4/83 Discontinued.

### **REDFORD KING SIZE [Redford 85]**

4/73 Test marketed - new 85 mm "full flavor" cigarette - Similar to Old Gold 85.

Discontinued.

### **SATIN 100**

6/82 Test marketed - delivers 11 mg tar and 0.9 mg nicotine - two rows of mechanical perforation.

7/87 Tipping increased (32 to 34 mm).

### **SATIN MENTHOL 100**

6/82 Test marketed - delivers 11 mg tar, 0.9 mg nicotine and 0.39 mg menthol in smoke - two rows of mechanical perforation.

7/87 Tipping increased (32 to 34 mm).

### **SATIN 100 - COLORED PACKS**

11/85 Introduced Satin 100 cigarettes in pink, yellow, and blue packs - cigarettes similar to Satin 100.

### **SPRING MENTHOL KING SIZE [Spring 85]**

7/59 Mechanically porous cigarette paper.

9/60 Reconstituted tobacco first observed.

2/62 Lighter filter; increased menthol content and delivery.

12/64 Reducing sugars decreased gradually.

2/65 Increase in filler menthol and smoke menthol.

7/65 TPM and nicotine deliveries increased - change in shape and denier of filter fibers - Paper porosity decreased - change from mechanically to inherently porous cigarette paper.

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- 10/65 TPM and nicotine deliveries increased - blend change indicated by changes in filler alkaloids - Paper porosity decreased.
- 1/66 Coupon added to pack.
- 3/67 Spring 85 replaced by Spring 100 in March, 1967.
- Discontinued.

### SPRING MENTHOL 100

- 3/67 Introduced - 100 mm mentholated cigarette with 20 mm CA filter.
- 11/67 Tar (1 mg) reduced by increasing tipping paper (24 to 27 mm).
- 1/68 Tar (2 mg) and nicotine (0.2 mg) reduced by increasing tipping paper (27 to 30 mm).
- 1/69 Filter length increased (20 to 25 mm) - Tar increased (2 mg).
- 10/70 Reconstituted tobacco increased 6 to 9% - RKS decreased 8 to 5%.
- 9/71 Reconstituted tobacco increased 11 to 18% - RKS decreased 8 to 0%.
- 12/72 Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and puff count - Also, lower tar and nicotine deliveries noted.
- 3/75 Cigarette length (99.2 to 98.4 mm) decreased. Tar (20 to 19 mg) and nicotine (1.1 to 1.0 mg) decreased.
- 11/75 Tar (1 mg) decreased by a change in tipping paper length (30 to 32 mm).
- 4/76 Filter length (25 to 27 mm) and fiber denier (6.6 to 7.6 mm) increased - Filler alkaloids increased.
- 12/76 Cigarette length increased (98.7 to 99.3 mm).
- Discontinued

### SPRING LEMON LIGHTS KING SIZE [Spring Lemon Light 85]

- 5/89 Test marketed in Connecticut - Delivers 9 mg tar and 0.7 mg nicotine - the lemon flavor source is citral.
- Discontinued

### SPRING LEMON LIGHTS KING SIZE MEN.[Spring Lemon Lights 85 Men.]

- 5/89 Test marketed in Connecticut - Delivers 9 mg tar, 0.7 mg nicotine and 0.4 mg smoke menthol - the lemon flavor source is citral.
- 1/92 Re-introduced in Pittsburgh and Delaware - 10 mg tar, 0.8 mg nicotine and 0.3 mg smoke menthol - the lemon flavor source is citral.
- Discontinued

**SPRING LEMON LIGHTS 100**

5/89 Test marketed in Connecticut - Delivers 11 mg tar and 0.8 mg nicotine - the lemon flavor source is citral.

12/90 Discontinued.

**SPRING LEMON LIGHTS 100 MENTHOL**

5/89 Test marketed in Connecticut - Delivers 11 mg tar, 0.8 mg nicotine and 0.5 mg smoke menthol - the lemon flavor source is citral.

1/92 Re-introduced in Pittsburgh and Delaware - 11 mg tar, 0.9 mg nicotine, and 0.3 mg smoke menthol - the lemon source is citral.

Discontinued

**STYLE LIGHTS 100 (BOX)**

7/91 Test marketed - 11 mg tar, 0.9 mg nicotine with 27 mm CA filter, white tipping paper and 23% ventilation; blend contains 22% reconstituted tobacco and 12% expanded tobacco.

3/92 National distribution - 11 mg tar and 0.9 mg nicotine. New package design - test market.

**STYLE LIGHTS MENTHOL 100 (BOX)**

7/91 Test marketed - 11 mg tar, 0.8 mg nicotine, and 0.53 mg smoke menthol with 27 mm CA filter, white tipping paper and 23% ventilation; blend contains 22% reconstituted tobacco and 12% expanded tobacco.

3/92 National distribution - 11 mg tar, 0.9 mg nicotine and 0.5 mg smoke menthol. New package design - higher tobacco weight and lower ventilation resulted in higher tar (12 mg to 11 mg) and nicotine (1.0 mg to 0.8 mg).

**STYLE LIGHTS SLIMS 100 (BOX)**

3/92 National distribution - 10 mg tar and 0.9 mg nicotine.

**STYLE LIGHTS SLIMS MENTHOL 100 (BOX)**

3/92 National distribution - 10 mg tar, 0.9 mg nicotine and 0.7 mg smoke menthol.

**STYLE ULTRA LIGHTS 100 (BOX)**

7/91 Test marketed - 4 mg tar, 0.4 mg nicotine with a 27 mm CA filter, white tipping paper and 66% ventilation; blend contains 13% reconstituted tobacco and 25% expanded tobacco.

**TRIUMPH KING SIZE [Triumph 85]**

11/78 Test marketed - 85 mm cigarette delivering 4 mg tar and 0.4 mg nicotine. Characterized by high alkaloid blend (2.8%) containing 19% Freon expanded tobacco. 25 mm dual CA filter with 60% ventilation.

**TRIUMPH MENTHOL KING SIZE [Triumph Menthol 85]**

11/78 Test marketed - 85 mm menthol cigarette delivering 4 mg tar and 0.4 mg nicotine. Characterized by high alkaloid blend (2.8%) containing 19% Freon expanded tobacco. 25 mm dual CA filter with 60% ventilation.

5/82 Tar (5 to 4 mg) and nicotine (0.6 to 0.5 mg) data changed on pack to comply with FTC Report.

**TRIUMPH 100**

3/81 Test marketed in New York - 100 mm, tar (4.7 mg) and nicotine (0.56 mg) - 6 rows of MP ventilation holes.

**TRIUMPH MENTHOL 100**

3/81 Test marketed in New York - 100 mm, tar (4.9 mg) and nicotine (0.58 mg) - 7 rows of MP ventilation holes.

**TRUE LONG SIZE (BOX)**

7/91 Test marketed - 4 mg tar, 0.4 mg nicotine with a 25 mm CA filter, white tipping paper, and 59% ventilation; blend contains 18% reconstituted tobacco and 14% expanded tobacco.

**TRUE KING SIZE [True 85]**

- 4/66 Introduced - king size filter cigarette with dual filter consisting of 10 mm CA and 10 mm polyethylene mouthpiece.
- 10/66 TPM decreased, 2 mg by increasing filter ventilation.
- 11/68 Tar decreased (1 mg) - A lower tobacco weight and filler rod TPM noted.
- 10/70 Reconstituted tobacco increased 10 to 14% - RKS decreased 8 to 3%.
- 9/71 Reconstituted tobacco increased 13 to 17% - RKS decreased 6 to 2%.
- 10/71 RKS decreased 2 to 0%.
- 11/72 Fiber shape changed C to Y-shape - No change in deliveries.
- 12/72 Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted.
- 10/74 Filter length increased (20 to 25 mm) - Lower tobacco wt.
- 7/76 New 5 mg tar version introduced. Lower tar achieved by increased filter ventilation and lower tobacco weight. Expanded tobacco level increased (11 to 23%).
- 6/78 Cigarette length decreased (84.7 to 84.0 mm).
- 5/82 Tar (5 to 4 mg) data changed on pack to comply with FTC Report.
- 11/83 Test marketing re-engineered version in New Mexico - uses laser perforation and a lower level of expanded tobacco.
- 5/84 Re-engineered versions in national distribution - uses laser perforation and lower level of expanded tobacco.
- 5/87 New package design - silver package with small "True" filter symbol - test marketed in January, 1987 in Minnesota - national in May, 1987.

**TRUE MENTHOL KING SIZE [True Menthol 85]**

9/66 Introduced - Similar to True filter except for presence of menthol.

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- 9/71 Reconstituted tobacco increased 13 to 17% - RKS decreased (6 to 2%).
- 10/71 RKS decreased (2 to 0%).
- 11/72 Fiber shape changed C to Y-shape - No change in deliveries.
- 12/72 Expanded tobacco added to blend (9%) - Resulted in lower tobacco weight, rod density, and higher total RTD - Also, lower puff count, tar and nicotine deliveries noted.
- 1/75 Filter length increased (20 to 25 mm) - Lower tobacco weight.
- 7/76 New 5 mg tar version introduced. Cigarettes are similar to True 85.
- 2/77 Lower tar (6.5 to 5.0 mg) and nicotine (0.5 to 0.4 mg) observed correlating with an increase in filter ventilation. Increased filter ventilation resulted from decreasing the number of rows of ventilation holes (from 9 to 5) in the tipping paper and using a more porous combining plug wrap.
- 6/78 Cigarette length decreased (84.5 to 84.0 mm).
- 11/83 Test marketing re-engineered version in New Mexico - uses laser perforation and a lower level of expanded tobacco.
- 5/84 Re-engineered versions in national distribution - uses laser perforation and lower level of expanded tobacco.
- 5/87 New package design - silver package with small "True" filter symbol - test marketed in January, 1987 in Minnesota - national in May, 1987.

**TRUE GOLD KING SIZE [True Gold 85]**

- 11/85 Introduced nationally in a gold pack - cigarette has cork tipping and delivers 10 mg tar and 0.8 mg nicotine.

Discontinued.

**TRUE ULTRA ONE KING SIZE [True Ultra One 85]**

- 11/80 Test marketed - ultra low tar (2 mg) and nicotine (0.2 mg) - 25 mm CA filter with 62% ventilation (6 rows of mechanically perforated).

Discontinued.

**TRUE 100**

- 4/74 Plain - test marketed - 12 mg tar and 0.8 mg nicotine - Blend contains 13% expanded tobacco.
- 6/75 Cigarette length (99.5 to 97.9 mm) decreased.
- 6/76 Cigarette length (98.1 to 99.2 mm) increased - Lower tobacco weight and rod density.
- 7/76 Filter length increased (25 to 27 mm). Tobacco wt. decreased.

- 8/79 Tar (13 to 8 mg) and nicotine (0.9 to 0.7 mg) decreased resulting from an increase in filter ventilation and a lower tobacco weight. A blend change indicated by a higher filler alkaloid content, lower reducing sugars and a higher expanded tobacco level (9 to 18%).
- 11/83 Test marketing re-engineered version in New Mexico - uses laser perforation and a lower level of expanded tobacco.
- 5/84 Re-engineered versions in national distribution - uses laser perforation and lower level of expanded tobacco.
- 5/87 New package design - silver package with small "True" filter symbol - test marketed in January, 1987 in Minnesota - national in May, 1987.
- 7/87 Tipping increased (32 to 34 mm).

#### TRUE 100 (BOX)

- 7/91 Test marketed - 6 mg tar, 0.5 mg nicotine with a 27 mm CA filter, white tipping paper, and 57% ventilation; blend contains 18% reconstituted tobacco and 14% expanded tobacco.

#### TRUE MENTHOL 100

- 4/74 Menthol - Test marketed - 12 mg tar and 0.8 mg nicotine - Blend contains 13% expanded tobacco.
- 6/75 Cigarette length (99.4 to 98.3 mm) decreased.
- 6/76 Cigarette length (98.3 to 99.1 mm) increased - Lower tobacco weight and rod density.
- 7/76 Filter length increased (25 to 27 mm). Tobacco weight decreased.
- 8/79 Tar (13 to 9 mg) and nicotine (0.9 to 0.7 mg) decreased resulting from an increase in filter ventilation and a lower tobacco weight. A blend change indicated by a higher filler alkaloid content, lower reducing sugars and a higher expanded tobacco level (9 to 18%).
- 11/83 Test marketing re-engineered version in New Mexico - uses laser perforation and a lower level of expanded tobacco.
- 5/84 Re-engineered version in national distribution - uses laser perforation and lower level of expanded tobacco.
- 1/87 New package design - silver package with small "True" filter symbol - test marketed in Minnesota.
- 3/87 Tipping paper length increased (32 to 34 mm) - no changes were noted in filter length or smoke deliveries.
- 5/87 New package design - national.

#### TRUE GOLD 100 (SOFT PACK)

- 11/85 Introduced nationally in a gold pack - cigarette has white tipping and delivers 11 mg tar and 0.9 mg nicotine.

Discontinued

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**TRUE GOLD 100 (BOX)**

11/85 Introduced nationally in a gold box - cigarette has white tipping and delivers 11 mg tar and 0.9 mg nicotine.

Discontinued

**YORK 88**

3/64 Introduced - dual filter, carbon on tow filter - Filter has gas phase activity.

4/64 Introduced - dual filter, bonded carbon filter - Filter has gas phase activity.

12/67 Discontinued.

**YORK 90 (NF)**

8/61 Introduced - Imperial Size (90 mm), filler similar to Old Gold Straights.

2/63 Alkaloids in filler decreased by 0.12%. Nicotine delivery decreased.

2/64 TPM increased 3 mg.

**YORK 100**

3/67 Introduced - 100 mm cigarette with 20 mm CA filter.

12/67 Discontinued.

**ZACK LONG SIZE [Zack 80]**

10/74 Introduced - package looks like blue denim - No unusual characteristics.

Discontinued.

**ZACK KING SIZE [Zack 85]**

10/74 Introduced - package looks like blue denim - No unusual characteristics.

Discontinued.

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### BRANDON KING SIZE (NF) [Brandon 85 (NF)]

2/62 Introduced - king size, nonfilter.

12/65 Discontinued.

### BRIGHT MENTHOL KING SIZE [Bright 85]

7/82 Test market - Tar (6 mg), nicotine (0.5 mg) and menthol (0.5 mg) - one row mechanical perforation.

11/82 National distribution.

11/83 Filter length increased (25 to 27 mm) - tobacco weight decreased (0.638 to 0.610 g) - filter RTD increased (4.3 to 4.7 in.).

3/84 More porous cigarette paper (24 to 17 sec.) with increased paper component (0.4 to 0.8%) used on brand - Increased filler menthol (3.1 to 3.4 mg) resulted in higher smoke menthol (0.43 to 0.56 mg).

1/87 Discontinued.

### BRIGHT MENTHOL 100

7/82 Test market - Tar (6 mg), nicotine (0.5 mg) and menthol (0.5 mg) - one row mechanical perforation.

11/82 National distribution.

3/84 Increased level of paper component (0.4 to 1.4%) - higher filler menthol (4.1 to 4.5 mg) resulted in higher smoke menthol (0.49 to 0.56 mg).

9/84 Filter length increased (27 to 31 mm) - tobacco weight decreased (0.780 to 0.736 g).

Discontinued.

### BROOKWOOD MENTHOL KING SIZE [Brookwood Menthol 85]

8/79 Test marketed - Tar (9 mg) - Cigarette has a high alkaloid blend with filter ventilation consisting of two rows of mechanically perforated holes. Very similar to the Real Menthol 85 already on the market.

Discontinued.

### CAMEL LONG SIZE (NF)

2/62 Nicotine delivery and filler alkaloids decreased.

2/65 Nicotine delivery and filler alkaloids increased. Also RTD decreased 0.3 inches of H<sub>2</sub>O.

12/69 Expanded tobacco (7%) noted in blend of some cigarettes.

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- 3/70 Expanded tobacco observed in all cigarettes - Tobacco weight lower - No change in tar or nicotine.
- 11/75 Filler alkaloids reduced (0.2%) correlating with a lower nicotine delivery.
- 9/78 Level of reconstituted tobacco increased from 9 to 16%.
- 11/80 Tar (24 to 19 mg), nicotine (1.7 to 1.4 mg), and CO (15 to 11 mg) deliveries were noted as a result in a change to a more porous cigarette paper and a change in the type paper component (phosphate to citrate).
- 3/83 CO delivery increased (12.6 to 15.8 mg) correlating with a change to less porous paper (17 to 25 sec.) - paper component increased (0.4 to 1.4%).
- 12/89 Tobacco weight (0.798 to 0.772 g) and rod density (0.233 to .224 g/cc) decreased.
- 9/90 The level of expanded tobacco decreased (16 to 12%).

**CAMEL FILTER LONG SIZE (BOX) [Camel Filter 80 (Box)]**

- 10/75 Plain - introduced in flip top box similar to Camel Filter 85 - Tar (19 mg) and nicotine (1.3 mg) deliveries.
- 9/90 The level of expanded tobacco decreased (16 to 12%).

Discontinued.

**CAMEL KING SIZE (BOX) [Camel 83 (Box)]**

- 7/90 New brand marketed in North Carolina and New York - delivers 18 mg tar and 1.2 mg nicotine - a 24.6 mm circumference was observed on this brand - the cigarette paper is wood pulp and flax fibers - the filter length and rod length of this product are 2 mm longer than the 80 mm version.
- 9/90 The level of expanded tobacco decreased (16 to 12%).

**CAMEL FILTER KING SIZE [Camel Filter 85]**

- 10/65 Introduced in three different packages - king size with a 20 mm CA filter.
- 4/66 Blend change noted in cigarette marketed in brown pack - lower alkaloids resulting in lower nicotine.
- 3/67 TPM (4 mg) and nicotine (0.2 mg) decreased as result of increase in filter efficiency.
- 4/67 TPM (2 mg) and nicotine (0.1 mg) decreased as result of change in blend.
- 9/68 Reconstituted material increased, 19 to 24%.
- 3/70 Expanded tobacco (9%) noted in blend - no change in tar or nicotine deliveries - Tobacco weight lower.
- 3/71 The amount of expanded tobacco increased (9 to 12%) - Nicotine delivery decreased (0.1 mg).
- 10/72 Filter length (20 to 21 mm) and tipping paper (24 to 25 mm) increased. Lower tar (1 mg) and nicotine (0.1 mg) deliveries observed.

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- 11/75 Filler alkaloids reduced (0.1%).
- 4/81 Tar (15.5 to 13.8 mg), nicotine (1.19 to 1.02 mg) and CO (17 to 14.4 mg) decreased - achieved filter ventilation (0 to 13%) by band of ESP holes.
- 3/83 Test marketed packs containing 12 cigarettes per pack.
- 7/89 Tobacco weight (0.752 to 0.718 g) and rod density (0.241 to 0.229 g/cc) decreased.
- 9/90 The level of expanded tobacco decreased (16 to 12%).
- 3/91 Changed from 50/50 wood pulp/flax to 95-100% wood pulp paper.

**CAMEL FILTER 100**

- 7/87 National distribution - delivers 18 mg tar and 1.1 mg nicotine.

**CAMEL MENTHOL KING SIZE [Camel Menthol 85]**

- 9/66 Introduced - 85 mm mentholated cigarette with 20 mm CA filter.
- 9/67 TPM (4 mg) and nicotine (0.2 mg) decreased as result of a blend change.
- Discontinued.

**CAMEL LIGHTS LONG SIZE (BOX) [Camel Lights 80 (Box)]**

- 4/80 Test marketed - Tar (8 mg) and nicotine (0.8 mg) - Similar in characteristics to Camel 85's.
- 8/82 CO (7.1 to 8.1 mg) increased - change to less porous cigarette paper (16 to 30 sec.) - paper component (0.9 to 1.4%) increased.
- 9/82 Tobacco weight (0.677 to 0.727 g) and rod density (0.250 to 0.264 g/cc) increased - decreased amount of expanded tobacco (18 to 11%) - decreased total alkaloids observed (1.99 to 1.59%).
- 5/83 Tar delivery increased (7.8 to 9.1 mg) due to decreased ventilation - Paper component decreased (1.4 to 0.9%). Paper porosity increased (29 to 16 sec.).
- 5/86 Re-engineered - blend contains two different types of reconstituted material - delivers 10 mg tar and 0.7 mg nicotine.
- 12/89 Tobacco weight (0.674 to 0.652 g) and rod density (0.227 to 0.217 g/cc) decreased.
- 9/90 The level of expanded tobacco decreased (16 to 12%).
- Discontinued.

**CAMEL LIGHTS KING SIZE (BOX) [Camel Lights 83 (Box)]**

- 7/90 New brand marketed in Louisville - delivers 11 mg tar and 0.7 mg nicotine - the filter length is 8 mm longer and the rod length is 4 mm shorter than the Camel Lights 80 (Box). A 24.6 mm circumference was observed - the cigarette is wood pulp and flax fibers.
- 9/90 The level of expanded tobacco decreased (16 to 12%).

**CAMEL LIGHTS KING SIZE [ Camel Lights 85]**

- 9/77 Introduced on test market - Low delivery cigarettes (10 mg tar and 0.8 mg nicotine) characterized by a 25 mm CA filter with 32% ventilation and a high alkaloid blend.
- 4/80 Tar (10 to 8 mg) and nicotine (0.9 to 0.8 mg) decreased from an increase in filter ventilation (25 to 35%).
- 3/83 Test marketed packs containing 12 cigarettes per pack.
- 9/83 Filter length increased (25 to 27 mm) - rod density increased (0.233 to 0.245 g/cc).
- 11/83 Less porous cigarette paper (16 to 24 sec.) with higher level of paper component (0.7 to 1.5%).
- 3/88 A lower level of paper component was observed.
- 7/89 Tar (9 to 11 mg), nicotine (0.7 to 0.8 mg) and CO (11 to 12 mg) deliveries increased as a result of lower ventilation (24 to 16%). Lower total (134 to 120 mm) and filter (117 to 86 mm) RTD were noted. Tobacco weight (0.689 to 0.642 g) and rod density (0.244 to 0.227 g/cc) decreased.
- 9/90 The level of expanded tobacco decreased (16 to 12%).

**CAMEL LIGHTS 100**

- 4/79 Introduced - 12 mg tar and 1.2 mg nicotine - Very similar to Winston Lights 100's.
- 5/84 Tar (11.3 to 9.7 mg), nicotine (0.88 to 0.77 mg) and CO (14.5 to 13.6 mg) deliveries decreased - increased ventilation (20 to 26%) - increased filter length (27 to 31 mm) and weight (0.17 to 0.19 g) - decreased tobacco weight (0.851 to 0.808 g) - tipping paper length increased (34 to 35 mm).
- 3/85 Filter ventilation increased (16 to 33%) - CO decreased (13.8 to 11.4 mg) - ventilation changed from mechanical to electrostatic perforation - lower total RTD (144 to 117 mm of H<sub>2</sub>O) was noted.
- 7/89 Tobacco weight (0.822 to 0.778 g) and rod density (0.243 to 0.230 g/cc) decreased.
- 9/90 The level of expanded tobacco decreased (16 to 12%).
- 5/91 Lowered expanded tobacco (12 to 7%), increased tobacco weight (0.77 to 0.80 g) and density (0.228 to 0.238 g/cc). Ventilation type changed from electrostatic to laser perforation.

**CAMEL NINETY 99 NINES 100 (BOX)**

- 7/91 Test marketed - 18 mg tar, 1.3 mg nicotine with a 27 mm CA filter, cork tipping paper and 11% ventilation; blend contains 25% reconstituted tobacco and 7% expanded tobacco.

**CAMEL NINETY 99 NINES LIGHTS 100 (BOX)**

- 7/91 Test marketed - 10 mg tar, 0.8 mg nicotine with a 31 mm CA filter, cork tipping paper and 30% ventilation; blend contains 25% reconstituted tobacco and 7% expanded tobacco.

**CAMEL TALLS 100**

- 9/71 Test marketed - similar to Winston 100 in most characteristics.
- 4/72 Removed from market.

**CAMEL ULTRA LIGHTS KING SIZE (BOX)** [Camel Ultra Lights 83 (Box)]

1/91 Received from Richmond and Arizona - delivers 6 mg tar and 0.5 mg nicotine.

**CAMEL ULTRA LIGHTS KING SIZE** [Camel Ultra Lights 84]

1/91 Received from Richmond and Arizona - delivers 6 mg tar and 0.5 mg nicotine.

1/91 Changed from 50/50 wood pulp/flax to 95-100% wood pulp.

**CAMEL ULTRA LIGHTS 100 (BOX)**

1/91 Received from Richmond and Arizona - delivers 6 mg tar and, 0.6 mg nicotine.

1/91 Changed from 50/50 wood pulp/flax to 95-100% wood pulp.

**CAMEL WIDES LONG SIZE (BOX)**

3/92 National distribution - 25 cigarettes per pack - 16 mg tar, 1.1 mg nicotine - 27 mm circumference.

**CAMEL WIDES LIGHTS LONG SIZE (BOX)**

3/92 National distribution - 25 cigarettes per pack - 12 mg tar, 1.0 mg nicotine - 27 mm circumference.

**CENTURY KING SIZE** [Century 85]

7/83 National distribution in 33 states - 25 cigarettes per pack - 14 mg tar and 1 mg nicotine.

7/87 New package graphics.

1/91 Changed from 50/50 wood pulp/flax to 95-100% wood pulp.

**CENTURY LIGHTS KING SIZE** [Century Lights 85]

7/83 National distribution in 33 states - 25 cigarettes per pack - 9 mg tar and 0.8 mg nicotine.

7/87 New package graphics.

5/88 The tar and CO deliveries decreased as a result of increased ventilation. A shorter tipping paper length (28 to 27 mm) was noted.

1/91 Changed from 50/50 wood pulp/flax to 95-100% wood pulp.

**CENTURY 100**

1/84 National distribution in 33 states - 25 cigarettes per pack - 11 mg tar and 1 mg nicotine.

7/87 New package graphics.

1/91 Changed from 50/50 wood pulp/flax to 95-100% wood pulp.

**CENTURY LIGHTS 100**

1/84 National distribution in 33 states - 25 cigarettes per pack - 11 mg tar and 1 mg nicotine.

7/87 New package graphics.

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1/91 Changed from 50/50 wood pulp/flax to 95-100% wood pulp.

**CENTURY LIGHTS MENTHOL 100**

11/85 Test marketed - 25 cigarettes per pack - 12 mg tar, 0.7 mg nicotine and 0.5 mg smoke menthol - 225 cigarettes for the price of 200.

**CHELSEA 100 (BOX)**

3/89 Test marketed in Florida and Pennsylvania - delivers 10 mg tar and 0.7 mg nicotine - ethylvanillin gives the sidestream smoke a sweet smell.

Discontinued.

**CHELSEA 100 MENTHOL (BOX)**

3/89 Test marketed in Florida and Pennsylvania - delivers 10 mg tar, 0.7 mg nicotine and 0.7 mg smoke menthol - ethylvanillin gives the sidestream smoke a sweet smell.

Discontinued.

**DAKOTA LONG SIZE (BOX) [Dakota 80 (Box)]**

3/90 Test marketed in Texas and Tennessee - delivers 17 mg tar and 1.1 mg nicotine. These cigarettes are targeted toward young women - the blend is not typical of Reynold's brands - 17% reconstituted tobacco and 10% expanded tobacco.

Discontinued.

**DAKOTA LIGHTS LONG SIZE (BOX) [Dakota Lights 80 (Box)]**

3/90 Test marketed in Texas and Tennessee - delivers 12 mg tar and 0.9 mg nicotine - targeted toward young women. The blend is not typical of Reynold's products - reconstituted tobacco is 17%, expanded stems are 10%.

Discontinued.

**DAKOTA KING SIZE (SLIDE BOX) [Dakota 83 (Slide Box)]**

1/91 Marketed in Arizona - compared to Dakota 80 (Box): increased ventilation (none to 5%), filter length (19.1 to 21.0 mm), decreased permeability (40 to 27), increased tar (17 to 19 mg/cigt.) and nicotine (1.11 to 1.33 mg/cigt.).

**DAKOTA KING SIZE (BOX)**

7/91 Test marketed - 18 mg tar, 1.4 mg nicotine with a 21 mm CA filter, cork tipping paper and 7% ventilation; blend contains 20% reconstituted tobacco and 8% expanded tobacco.

Discontinued.

**DAKOTA LIGHTS KING SIZE (BOX)**

7/91 Test marketed - 12 mg tar, 1.0 mg nicotine with a 27 mm CA filter, white tipping paper and 26% ventilation; blend contains 20% reconstituted tobacco and 8% expanded tobacco.

Discontinued.

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